FINAL PROGRAM

SCMR

Society for Cardiovascular Magnetic Resonance

15th Annual Scientific Sessions

February 2-5, 2012

Marriott World Center

Orlando, Florida

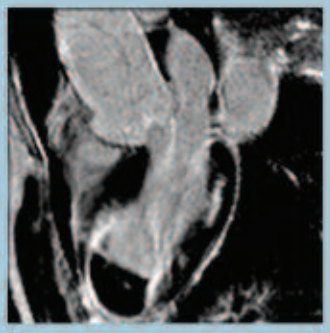
Jointly sponsored by SCMR and the University of Minnesota

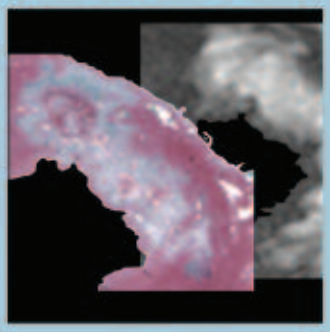
www.scmr.org

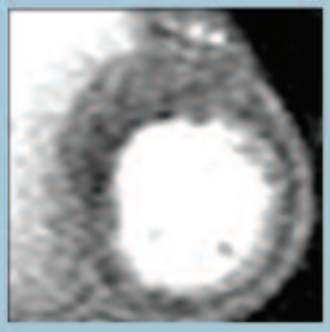
Pre-conference Courses
- Physicians
- Congenital/Pediatric

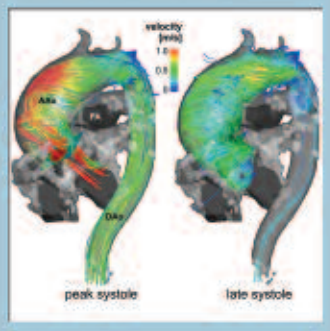
February 2, 2012

Technologist Workshop
February 3-5, 2012









SCMR

15th Annual Scientific Sessions • February 2 – 5, 2012

Marriott World Center • Orlando, FL USA

PROGRAM-AT-A-GLANCE

TIME	Sago Ballroom	Crystal Ballroom J1	Crystal Ballroom J2	Crystal Ballroom G1	Crystal Ballroom A-B-C
WEDNESDAY, FEBRUARY 1, 2012					
8:00 AM - 6:00 PM			SCMR/ISMRM Jointly Sponsored Workshop		
THURSDAY, FEBRUARY 2, 2012					
8:00 AM - 6:00 PM		Congenital/Pediatric Pre-conference Course	SCMR/ISMRM Jointly Sponsored Workshop	Physician's Pre-Conference Course	
FRIDAY, FEBRUARY 3, 2012					
7:00 AM - 8:00 AM	Physics for Physicians 1 Crystal Ballroom P	Cardiology for Non-cardiologists 1 Crystal Ballroom M			
8:00 AM - 9:30 AM	Welcome and Opening Plenary				
9:30 AM - 10:00 AM	CMR Questionnaire				
10:00 AM - 10:30 AM	Refreshment Break/Exhibits/Posters - Royal/Sabal Ballrooms				
10:30 AM - 12:00 PM	Invited Lecture Session 1 Non-ischemic Heart Disease 1	Case Review 1 Fascinating Vascular Disease Cases	Invited Lecture Session 2 Cardiac Metabolism and Molecular Imaging	Oral Abstract Session 1 ECA Clinical	Technologist Workshop
12:00 PM - 12:30 PM	SCMR Business Meeting				
12:30 PM - 1:30 PM	Lunch/Exhibits/Posters - Royal/Sabal Ballrooms				
1:30 PM - 3:00 PM	Invited Lecture Session 3 Coronary and Vascular CMR	Case Review 2 Congenital Heart Disease 1	Oral Abstract Session 2 ECA Basic Science	Oral Abstract Session 3 Clinical Outcome and Prognosis	
3:00 PM - 3:30 PM	Refreshment Break/Exhibits/Posters				
3:30 PM - 5:00 PM	Invited Lecture Session 4 Myocardial Perfusion and Ischemia	Case Review 3 When CMR Complements Other Modalities	Oral Abstract Session 4 ECA Basic Translational	Oral Abstract Session 5 DCM and Secondary CMP	
5:00 PM - 6:30 PM	Invited Lecture Session 5 Myocardial Infarction and Area at Risk	Case Review 4 Cardiac Masses: Correlating Imaging with Pathology	Oral Abstract Session 6 Comparison to Other Modalities and Cost Effectiveness	Oral Abstract Session 7 Vascular MRI: From Research to Clinical Application	
6:30 PM - 7:30 PM	Moderated Poster Session 1/Poster Viewing/Wine and Cheese Reception - Royal/Sabal Ballrooms				
SATURDAY, FEBRUARY 4, 2012					
7:00 AM - 8:00 AM	Physics for Physicians 2 Crystal Ballroom P	Cardiology for Non-cardiologists 2 Crystal Ballroom M			
8:00 AM - 9:30 AM	Invited Lecture Session 6 Interventional MRI - Vascular and Structural Heart Disease	Case Review 5 Myocardial Inflammation: What is the Diagnosis?	Oral Abstract Session 8 Novel Techniques for Clinical Application	Oral Abstract Session 9 Congenital Heart Disease 1	Technologist Workshop
9:30 AM - 10:00 AM	Refreshment Break/Exhibits/Posters				
10:00 AM - 11:30 AM	Invited Lecture Session 7 Advanced CMR Techniques in Pediatric/Congenital Heart Disease	Case Review 6 Best Cases from the SCMR Website	Invited Lecture Session 8 Non-ischemic Cardiomyopathies 2	Oral Abstract Session 10 CAD Acute Myocardial Injury	
11:30 AM - 12:30 PM	Moderated Poster Session 2/Lunch/Exhibits/Posters				
12:30 PM - 2:00 PM	Invited Lecture Session 9 High Throughput CMR (Protocol Optimizing): Improving Quantification and Reproducibility	Case Review 7 Perfusion Imaging by CMR: Both Usual and Unusual Cases	Oral Abstract Session 11 Congenital Heart Disease 2	Oral Abstract Session 12 Stepping into New Insights: Enhancing Our Understanding	
2:00 PM - 2:30 PM	Refreshment Break/Exhibits/Posters				
2:30 PM - 4:00 PM	Invited Lecture Session 10 CMR Application in Cardiac Electrophysiology	Case Review 8 Surprising Findings in Valvular Disease	Oral Abstract Session 13 Non-ischemic Heart Disease: A Wide Spectrum from Technique to Disease	Oral Abstract Session 14 CAD: Assessment of Perfusion - Routine Patient Care and Research	
4:00 PM - 5:30 PM	Invited Lecture Session 11 Emerging CMR Technology	Case Review 9 Congenital Heart Disease 2	Oral Abstract Session 15 Hypertropic Cardiomyopathy	Oral Abstract Session 16 Arrhythmias, EP, and Interventional Applications	
5:30 PM - 6:00 PM	CMR Technology Updates				
6:00 PM - 6:30 PM	Award Presentations				
6:30 PM - 8:00 PM	Awards Reception Crystal Ballroom H				
SUNDAY, FEBRUARY 5, 2012					
7:00 AM - 8:00 AM	Physics for Physicians 3 Crystal Ballroom P	Cardiology for Non-cardiologists 3 Crystal Ballroom M			
8:00 AM - 9:30 AM	Invited Lecture Session 12 Cost Effectiveness of CMR	Case Review 10 Interactive CMR Cases: State of the Heart	Invited Lecture Session 13 Informing Clinical Decision in Congenital Heart Disease	Oral Abstract Session 17 Novel Techniques - Assessment of the Myocardium	Technologist Workshop
9:30 AM - 10:00 AM	Refreshment Break				
10:00 AM - 11:30 AM	Invited Lecture Session 14 CMR Safety - Contrast Agents, Medical Devices, and Issues Related to High Field Strengths	Invited Lecture Session 15 Towards Patient Specific Quantitative CMR and Computational Models of CV Flow and Function	Invited Lecture Session 16 CMR Imaging in Pre-clinical Research and Drug Development	Invited Lecture Session 17 Interventional MRI - Electrophysiology	
11:30 AM - 1:00 PM	Closing Plenary Session				
1:00 PM - 1:30 PM	Closing Remarks/Highlights from 2012 Scientific Sessions				

LEGEND: Clinical | Congenital | Basic Science | Multi-track

Welcome

Dear colleagues and friends,

Welcome to Orlando and the 15th Annual Scientific Sessions of the Society for Cardiovascular Magnetic Resonance! The Board of Trustees shares a strong commitment to advancing the science and practice of CMR and your attendance supports this goal and the vision and mission of SCMR.

I would like to thank the 2012 Program Committee, chaired by Dr. Raymond Kwong and Dr. Jeanette Schulz-Menger, for their time, expertise, and dedication given to designing a program guaranteed to be up-to-date, boundary pushing, and thought-provoking.

This year's meeting continues the trend of recent meetings that have focused on patient outcomes and cost effectiveness, with an Opening Plenary session translating these concepts onto the impact of CMR on Patient Care. We are honored and delighted to have Dr. Robert Bonow, a world recognized clinician and scientist in cardiovascular care, our own Past-President of SCMR Dr. Warren Manning, and SCMR Board Member Dr. Matthias Stuber who will be presenting in the opening plenary.

The scientific program has been developed to emphasize categories along four targeted tracks: General CMR, Congenital/Pediatric, Basic Science, and Case Studies. This year's program continues to build on prior years with the outstanding group of experts assembled to discuss the wide range of interesting topics and provide both an overview of CMR for those new to the field, along with sessions designed for those acquiring a deeper knowledge of CMR technology, techniques, and applications, as well as potential for the future. In parallel, the Technologist's Workshop will offer technologists sessions focused on both their clinical and research educational needs.

For those arriving early, the Pre-Conference programs include a Physician's Course, a Congenital/Pediatric Course, and for the first time a two-day joint workshop with ISMRM on Flow and Motion that takes advantage of the natural mutual interests our two memberships reflect. This joint workshop is the first of what we hope will be many more to come as we continue to expand our collaborative efforts with others interested in CMR and cardiovascular care.

Again, I extend a warm welcome to each of you and feel confident you will value the knowledge, contacts, and insights gained at the 2012 SCMR Scientific Sessions.

Sincerely,

Scott D. Flamm, MD
President, SCMR

COVER AND INSIDE PHOTO CREDITS: Through the courtesy of Drs. Jeanette Schulz-Menger, Otavio Coelho-Filho, and Michael Markl, the front cover features CMR images of an anterior infarction with extensive intracavitary thrombus, the histology and ex-vivo imaging of an infarction, an abnormal myocardial perfusion, and a 3D time-resolved phase-contrast flow mapping of an ascending aortic aneurysm.

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SCMR Vision Statement

The Society for Cardiovascular Magnetic Resonance (SCMR) will be the leading international representative and advocate for all physicians, scientists, and technologists working in CMR to improve patient outcomes through excellence in education, training, standards, research and development.

The Mission of SCMR is to:

- Be the premier international model and provider of CMR education, training, standards development, and accreditation.
- Maximize clinical effectiveness of CMR through coordinated comparative effectiveness research efforts resulting in evidence-based guidelines to enhance patient care and outcomes.
- Continually enhance the accuracy, efficiency, and effectiveness of CMR in cardiovascular healthcare through technological advances.
- Promote scientific exchange through organization of an annual international scientific conference, publication of the *Journal of Cardiovascular Magnetic Resonance*, and interactive internet-enabled tools including the SCMR website.
- Build an expanding global membership of physicians, scientists, technologists, and interested healthcare partners focused on clinical applications and research in CMR.
- Develop and advance close working alliances with related societies, industry partners, and governmental and regulatory agencies to more effectively integrate and elevate the use of CMR within cardiovascular healthcare.

The Goals of the Conference are to:

- Deliver state of the art information on the science of CMR imaging and spectroscopy
- Provide a forum for the presentation of new information on CMR
- Compare and contrast CMR methods with other cardiovascular imaging approaches

At the conclusion of the Scientific Sessions, participants should be better able to:

- Discuss current and new applications where CMR helps in the diagnosis or management of adult cardiovascular disease
- Discuss current and new applications where CMR helps in the diagnosis or management of pediatric and adult congenital cardiovascular disease
- Present evidence that CMR predicts cardiovascular outcomes in patients with a wide range of diseases
- Present current evidence that CMR can be used as a valuable tool in advancing the development of new therapies for cardiovascular disease
- Explore current evidence that support CMR to be cost-effective and to improve patient care
- Present and discuss contrast enhanced and non-contrast enhanced strategies of vascular MRI
- Discuss new approaches and methodologies for CMR image acquisition in patients with cardiovascular disease
- Promote high safety standards and consistency of imaging protocols in the use of CMR in the care of patients with cardiovascular disease
- Present and discuss new approaches of molecular and interventional CMR

Accreditation

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the Society for Cardiovascular Magnetic Resonance and the University of Minnesota. The University of Minnesota is accredited by the ACCME to provide continuing medical education for physicians.

The University of Minnesota designates the educational activities listed below for the maximum of *AMA PRA Category 1 Credits™*:

Physician Pre-conference Course – 8 *AMA PRA Category 1 Credits™*

Congenital/Pediatric Pre-conference Course – 8 *AMA PRA Category 1 Credits™*

2012 Scientific Sessions – 21.25 *AMA PRA Category 1 Credits™*

Physicians and other attendees should only claim credit commensurate with the extent of their participation in the activity.

Other Healthcare Professionals who participate in this CME activity may submit their Statements of Attendance to their appropriate accrediting organizations or state boards for consideration of credit. The participant is responsible for determining whether this activity meets the requirements for acceptable continuing education.

Technologist Workshop

This activity is approved for credit by the American Society of Radiologic Technology (ASRT) for a maximum of 15.75 CE credits.

Each technologist should claim only those hours of credit actually spent in this activity.

Admission

Conference name badges are required for admission to all activities related to the 15th Annual Scientific Sessions, including the exhibit hall and social events.

Registration Hours

The 2012 SCMR Registration Desk is located at the Crystal Ballroom located in the Crystal Ballroom Foyer. The Registration Desk will be open and staffed during the following hours:

Wednesday, February 1	12:00 PM – 6:30 PM
Thursday, February 2	7:00 AM – 6:00 PM
Friday, February 3	6:30 AM – 6:30 PM
Saturday, February 4	6:30 AM – 6:30 PM
Sunday, February 5	6:30 AM – 2:00 PM

Acknowledgements

The Society for Cardiovascular Magnetic Resonance gratefully acknowledges the support of these scientific sessions and SCMR's objectives from our industry supporters:

Siemens Healthcare
Toshiba American Medical Systems
GE Healthcare
Medis medical imaging systems, Inc.
Heart Imaging Technologies
Philips Healthcare

Exhibits

Educational and informational exhibits will be available in Royal/Sabal Ballrooms during the Scientific Sessions. Exhibiting company representatives will be available to answer your questions about their products and services. Please visit the exhibits and thank the representatives for their support. The complete list of exhibits can be found on pages 56-58.

Friday, February 3	10:00 AM – 7:30 PM
Saturday, February 4	7:00 AM – 3:30 PM

Speaker Ready Room

The 2012 Program Committee is committed to providing attendees cutting edge technology and coordinated presentations at the Scientific Sessions. To be fully prepared for your session, each presenter is requested to visit the Speaker Ready Room at least 24 hours prior to your presentation. The Speaker Ready Room is located in the St. Louis Room and will be open the following days and times:

Wednesday, February 1	5:00 PM – 8:00 PM
Thursday, February 2	7:00 AM – 6:00 PM
Friday, February 3	7:00 AM – 6:00 PM
Saturday, February 4	7:00 AM – 6:00 PM
Sunday, February 5	7:00 AM – 1:00 PM

Disclosure Statement

It is the policy of the University of Minnesota - Office of Continuing Medical Education to insure balance, independence, objectivity and scientific rigor in all of its sponsored educational activities. All participating speakers and moderators, course directors, and planning committee members are required to disclose to the program audience any financial relationships related to the subject matter of this program. Relationships of spouse/partner with proprietary entities producing healthcare goods or services should be disclosed if they are of a nature that may influence the objectivity of the individual in a position to control the content of the CME activity. Disclosure information is reviewed in advance in order to manage and resolve any possible conflicts of interest. Financial disclosure information for each speaker will be shared with attendees prior to the speaker's presentation.

A complete list of disclosures is available on pages 52-54.

Marriott World Center

Physician Pre-Conference Course: Introduction to Cardiovascular MR

Thursday, February 2, 2012

8:00 AM – 6:00 PM Crystal Ballroom G1

Chairs: Patricia Bandettini, MD, NHLBI-National Institutes of Health
Steffen Petersen, MD, DPhil, Barts and The London NHS Trust

*Pre-conference Course Educational Objectives**

- Modify sequence parameters to enhance MR image quality and to identify common artifacts
- Plan, perform, and read cardiac MRI including stress test
- Recognize the current common pulse sequence techniques and their potential clinical applications

Agenda

8.00 am – 8:10 am **Introductory Remarks**
Session Co-chairs: Patricia Bandettini, MD, NHLBI; Steffen Petersen, MD, Barts and The London NHS Trust

8:10 am - 9:50 am **Basics of CMR**

8:10 am **Basics: Spins and Hardware**
Tobias Schaeffter, PhD, King's College London

8:30 am **Black-blood Sequences**
Anthony Aletras, PhD, University of Central Greece

8:50 am **Bright-blood Sequences**
Robert Judd, PhD, Duke University

9:10 am **Let's Go Faster: Parallel Acquisition Techniques**
Michael Hansen, PhD, National Institutes of Health

9:30 am **Dealing with Breathing Artifacts and Arrhythmia**
Christine Lorenz, PhD, Siemens Corporate Research, Inc.

9:50 am - 10:10 am **Refreshment Break**

10:10 am - 12:10 pm **How To Sessions**

10:10 am **How to Measure Regional and Global Ventricular Function**
Ceri Davies, MD, Barts and London NHS Trust

10:30 am **How to Quantify Blood Flow**
Alex Pitcher, MD, Oxford Centre for Clinical Magnetic Resonance Research

10:50 am **How to Perform High-quality Delayed Enhancement**
Alexander Dick, MD, University of Toronto

11:10 am **How to Optimize MR Angiography**
Christoph Herborn, MD, Medical Prevention Center Hamburg

11:30 am **How to Assess the Coronary Arteries Using CMR**
Hajime Sakuma, MD, MIE University

11:50 am **How to Assess Myocardial Iron Overload**
John Paul Carpenter, MBBS, Royal Brompton Hospital

12:10 pm - 1:10 pm **Lunch (on own)**

1:10 pm - 3:10 pm **Clinical Applications of CMR - Part 1**

1:10 pm **Optimizing Efficiency of Protocols**
Mark Westwood, MD, The London Chest Hospital

1:30 pm **CMR to Assess the Etiology of Cardiomyopathy**
Joseph Suttie, MBBS, University of Oxford

1:50 pm **CMR in the Assessment of Possible Arrhythmogenic Right Ventricular Dysplasia**
Matthias Friedrich, MD, Université de Montréal

2:10 pm **CMR in Suspected Acute Myocarditis**
Ian Paterson, MD, University of Alberta

2:30 pm **CMR in Myocardial Ischemia**
Stephen Harden, MD, Southampton General Hospital

2:50 pm **CMR in Myocardial Viability**
Phillip Yang, MD, Stanford University

3:10 pm - 3:40 pm **Refreshment Break**

3:40 pm - 6:00 pm **Clinical Applications of CMR - Part 2**

3:40 pm **CMR in Congenital Heart Disease**
Vivek Muthurangu, MD, UCL Institute of Child Health and Great Ormond Street Hospital

4:00 pm **CMR in Valvular Disease**
Erik Schelbert, MD, University of Pittsburgh

4:20 pm **CMR in Pericardial Disease**
Monvadi Srichai, MD, NYU School of Medicine

Physician Pre-Conference Course: Introduction to Cardiovascular MR (cont'd)

4:40 pm **CMR in the Assessment of Intracardiac Mass**
Peter Buser, MD, University Hospital Basel

5:00 pm **Knowing When to Choose CMR in a Multimodality Imaging Climate**
Marcus Chen, MD, National Institutes of Health

5:20 pm **Panel Discussion of Submitted Questions**
Patricia Bandettini, MD, NHLBI
Matthias Friedrich, MD, Université de Montréal
Christoph Herborn, MD, MBA, Medical Prevention Center Hamburg
Vivek Muthurangu, MD, UCL Institute of Child Health and Great Ormond Street Hospital
Steffen Petersen, MD, The Barts and The London NHS Trust
Subha Raman, MD, The Ohio State University
Tobias Schaeffter, PhD, King's College London

SCMR 2012 Pre-conference Course: Congenital/Pediatric Pre-conference Course

8:00 AM – 6:00 PM **Crystal Ballroom J1**

Chairs: Vivek Muthurangu, UCL Institute of Child Health and Great Ormond Street Hospital;
Andrew Powell, MD, Children's Hospital Boston

*Pre-conference Course Educational Objectives**

- Discuss current and new applications where CMR helps in the diagnosis or management of congenital and adult congenital cardiovascular disease.
- Better understand what CMR technology can provide in the management of congenital heart disease

8:00 am – 10:00 am **Session I - Practical Answers to Everyday Questions**

8:00 am **How to Make Sense of Congenital Cardiac Anatomy - The Segmental Approach**
Tal Geva, MD, Children's Hospital Boston

8:30 am **How to Write a Great Congenital CMR Report**
James Nielsen, MD, Mt. Sinai School of Medicine

8:50 am **Too Small or Too Big - What Are Normal Values for Ventricular Parameters in Children?**
Adam Dorfman, MD, University of Michigan Health Systems

9:10 am **What are the Risks of Anesthesia and Sedation for CMR?**
Kirsten Odegard, MD, Children's Hospital Boston

9:40 am **Which Cardiac Devices are CMR Compatible?**
Tobias Schaeffter, MD, King's College London

10:00 am – 10:30 am **Refreshment Break**

10:30 am – 12:30 pm **Session II - Sharpening Your CMR Tools**

10:30 am **Ventricular Function: How to Make the Gold Standard Shine**
Sohab Fratz, MD, Deutsches Herzzentrum München

10:55 am **Flow Imaging: Tips, Tricks, and Pitfalls**
Philipp Beerbaum, MD, PhD, King's College London

11:20 am **Contrast-enhanced Angiography: Optimizing the Protocol**
Taylor Chung, MD, Children's Hospital & Research Center

11:45 am **3D SSFP Whole Heart Imaging – A Recipe for a Clear Picture**
Gerald Greil, MD, King's College London

12:05 pm **Fibrosis Imaging: How to Get the Best from Your Scar Imaging**
Carsten Rickers, MD, University Hospital of Schleswig–Holstein

12:30 pm – 1:30 pm **Lunch (on own)**

1:30 pm – 3:30 pm **Session III - Standard Clinical Applications**

1:30 pm **Shunt Lesions**
Oliver Tann, MD, Great Ormond Street Hospital

1:55 pm **Coarctation of the Aorta**
Laureen Sena, MD, Children's Hospital Boston

SCMR 2012 Pre-conference Course: Congenital/Pediatric Pre-conference Course (cont'd)

2:15 pm **Transcatheter Pulmonary Valve Implantation**
Andrew Taylor, MD, UCL Institute of Child Health

2:40 pm **Fontan Operation**
Rajesh Krishnamurthy, MD, Texas Children's Hospital

3:05 pm **Cardiac Masses**
Rebecca Beroukhim, MD, Children's Hospital Boston

3:30 pm – 4:00 pm **Refreshment Break**

4:00 pm – 6:00 pm **Session IV - Advanced Clinical Applications**

4:00 pm **MR Augmented Catheterization: Luxury or Necessity?**
Reza Razavi, MD, King's College London

4:25 pm **Measurement of Myocardial Strain: Does It Change Anything?**
Kan Hor, MD, Cincinnati Children's Hospital Medical Center

4:50 pm **Complex Cases: Test Your Knowledge**
Vivek Muthurangu, MD, UCL Institute of Child Health and Great Ormond Street Hospital
Andrew Powell, MD, Children's Hospital Boston

5:30 pm **Q & A Session with Panel**

SCMR

Friday, February 3, 2012

7:00 am – 8:00 am **Continental Breakfast** Palms Ballroom Foyer

7:00 am – 8:00 am **Physics for Physicians** Crystal Ballroom P

How to Make MR Images
Michael Hansen, PhD, National Institutes of Health

7:00 am – 8:00 am **Cardiology for Non-cardiologists** Crystal Ballroom M

7:00 am **Most Common Clinical Indications for CMR: Strengths and Weaknesses**
Afshin Farzaneh-Far, MD, PhD, University of Illinois

7:30 am **CMR-specific Artifacts**
Daniel B. Ennis, PhD, University of California – Los Angeles

8:00 am – 8:15 am **Welcome and Opening Comments** Sago Ballroom
Scott Flamm, MD, Cleveland Clinic

8:15 am – 9:30 am **Opening Plenary Session – Advancing Patient Care Using CMR Imaging**
Moderators: Raymond Y. Kwong, MD, MPH, Brigham and Women's Hospital
Jeanette Schulz-Menger, MD, Charite Universitatsmedizin Berlin

Upon completion of this educational activity, the participant should be better able to:
- Understand the current evidence surrounding viability imaging from the STICH trial and the role of cardiac magnetic resonance imaging in this area
- Recognize the current issues and the future of noninvasive imaging of the coronary arteries by magnetic resonance
- Name a number of novel technical development that can improve patient management in the near future

8:15 am **What is the Status of Viability Imaging after STICH?**
Robert Bonow, MD, Northwestern University Medical Center

8:35 am **The Present and the Future of Coronary Magnetic Resonance Angiography**
Warren Manning, MD, Beth Israel Deaconess Medical Center

8:55 am **What CMR Technology Can Take Patient Care to a New Level in the Near Future**
Matthias Stuber, PhD, Lausanne University

9:15 am **Q and A**

9:30 am – 10:00 am **CMR Questionnaire**
Moderator: Gerald Pohost, MD, University of Southern California

10:00 am – 10:30 am **Refreshment Break** Royal/Sabal Ballrooms

10:30 am – 12:00 pm **Concurrent Sessions**

Invited Lecture 1 – Non-ischemic Heart Disease 1 Sago Ballroom
Moderators: Ricardo Cury, MD, Radiology Associates of South Florida
Steffen Petersen, MD, The Barts and The London NHS Trust

Upon completion of this educational activity, the participant should be better able to:
- Optimize the CMR protocols used in non-ischemic heart disease
- Differentiate cardiomyopathies using CMR
- Discuss the impact of CMR on the management of non-ischemic heart disease

10:30 am **DCM**
Ravi Assomull, MRCP, Royal Brompton Hospital

10:45 am **Myocarditis**
Saidi Mohiddin, MBChB, London Chest Hospital

11:00 am **Heritable Cardiomyopathies**
Ali Yilmaz, MD, Robert-Bosch-Krankenhaus

11:15 am **Progress in ARVD/C Diagnosis**
David Bluemke, MD, PhD, National Institutes of Health

11:30 am **Impact of CMR on Treatment of NICM**
Saman Nazarian, MD, Johns Hopkins Outpatient Center

11:45 am **Q and A**

Invited Lecture 2 – Cardiac Metabolism and Molecular Imaging Crystal Ballroom J2
Moderators: Gregory Lanza, MD, PhD, Washington University
Graham Wright, MD, Sunnybrook Health Sciences Centre

Upon completion of this educational activity, the participant should be better able to:
- Appreciate in overview the current status of imaging atherosclerosis and cardiac energetics with MRI today
- Recognize emerging MRI molecular imaging agents that can build upon these current capabilities
- Understand the clinical unmet need and opportunity that molecular imaging offers in the management of cardiovascular patients

10:30 am **Targeted Agents for Atherosclerosis Characterization**
David Sosnovik, MD, Harvard Medical School

10:45 am **Carotid Angiogenesis and 19F Imaging**
Shelton Caruthers, PhD, Washington University – St. Louis

11:00 am **Cardiac Energetics**
Stefan Neubauer, MD, John Radcliffe Hospital

11:15 am **Visualizing Cardiomyocyte Function Using Carbon-13 MR**
Marie Schroeder, MD, University of Oxford

11:30 am **13C Imaging of Metabolic Disorders - Physiological Considerations**
Craig Malloy, MD, University of Texas Southwestern Medical Center

11:45 am **Q and A**

Case Review 1 – Fascinating Vascular Disease Cases

Crystal Ballroom J1

Moderators: Richard Coulden, MD, University of Alberta
Uma Valeti, MD, University of Minnesota
Presenters: Lucien Abboud, MD, Debakey and Heart Vascular Institute
Christine Heilmaier, MD, HELIOS Klinikum Krefeld
Mayil Krishnam, MRCP, FRCR, University of California - Irvine

Oral Abstract Session 1 – Early Career Award – Clinical

Crystal Ballroom G1

Moderators: Joao Lima, MD, Johns Hopkins University
Dudley J. Pennell, MD, Royal Brompton Hospital

10:35 am **01 MRI in Childhood Arrhythmogenic Right Ventricular Cardiomyopathy and Proposed Modification of the Task Force Criteria for Children**
Lars Grosse-Wortmann, MD, Hospital for Sick Children

10:49 am **02 Feasibility and Prognostic Value of Stress-perfusion CMR in Obesity**
Ravi Shah, MD, Brigham and Women's Hospital

11:03 am **03 Stress CMR Myocardial Perfusion Imaging (CMR-MPI) Is Cost-effective Compared to Nuclear SPECT: A Retrospective Cost-effectiveness Analysis**
Sanjeev Francis, MD, Massachusetts General Hospital

11:17 am **04 Impact of CMR Parameters on Prognosis after ST-Elevation Myocardial Infarction – A Comparison to Traditional Outcome Markers**
Suzanne de Waha, University of Leipzig, Heart Center

11: 31 am **05 Non-invasive Assessment of Interstitial Myocardial Fibrosis in Pressure-Overload Left Ventricular Hypertrophy**
Andrew Jabbour, Cardiology Fellow, Royal Brompton and Harefield NHS Foundation Trust, Imperial College London

11:45 am **06 Prognostic Significance of Midwall Fibrosis in Dilated Cardiomyopathy**
Ankur Gulati, Royal Brompton Hospital

12:00 pm – 12:30 pm **SCMR Business Meeting** Sago Ballroom

12:30 pm – 1:30 pm **Posters, Exhibits, Lunch (on own)** Royal/Sabal Ballrooms

1:30 pm – 3:00 pm **Concurrent Sessions**

Invited Lecture 3 – Coronary and Vascular CMR

Sago Ballroom

Moderators: James Carr, MD, PhD, Northwestern University
Warren Manning, MD, Beth Israel Deaconess Medical Center

Upon completion of this educational activity, the participant should be better able to:

- Know the optimal dose reduction strategies for performing MRA in the at risk patient
- Understand the current role of coronary MRA in clinical practice
- Have a better understanding of MRI capability and shortcomings for coronary lumen and arterial wall imaging

1:30 pm **Coronary Lumen and Arterial Wall Imaging with MRI**
Debiao Li, PhD, Cedars Sinai Medical Center

1:50 pm **MRA in the "At Risk" Patient - Dose Reduction Strategies and Non-Contrast Techniques**
Robert Edelman, MD, Evanston Hospital

2:10 pm **Coronary MRA in Real Practice: Is it Feasible and Cost-effective?**
Hajime Sakuma, MD, MIE University Hospital

2:30 pm **MRI of the Peripheral Vasculature - The New Gold Standard?**
J. Paul Finn, MD, University of California – Los Angeles

2:50 pm **Q and A**

Case Review 2 – Congenital Heart Disease 1

Crystal Ballroom J1

Moderators: Reza Rezavi, MD, King's College London
Michael Taylor, MD, Cincinnati Children's Hospital Medical Center
Presenters: Jaspreet Singh, MD, University of Arizona
Supriya Jain, MD, Children's Hospital Boston
Mark Rabbat, MD, Loyola University Medical Center
Rebecca Beroukhim, MD, Children's Hospital Boston
Anil Attili, MD, University of Kentucky
Sandra Kocina, MD, Emory University
Sowmya Balasubramanian, MD, Children's Hospital Boston

Oral Abstract Session 2 – Early Career Award - Basic Science

Crystal Ballroom J2

Dedicated to the memory of Stefan Fischer

Moderators: Dara Kraitchman, VMD, PhD, Johns Hopkins University
Stefan Neubauer, MD, John Radcliffe Hospital

1:35 pm **O7 A New CMR Protocol for Non-destructive, High Resolution, Ex-vivo Assessment of the Area At Risk Simultaneous with Infarction: Validation with Histopathology**
Lowie Van Assche, MD, Duke University

1:49 pm **O8 Left Atrial Scar Assessment Using Imaging with Isotropic Spatial Resolution and Compressed Sensing**
Mehmet Akcakaya, PhD, Beth Israel Deaconess Medical Center

2:03 pm **O9 Interactive Real-time Mapping and Ablation of the Pulmonary Veins and Cavotricuspid Isthmus in an Ovine Model with an Externally-irrigated MRI-compatible Ablation Catheter**
Anand Ganesan, MBBS PhD, University of Adelaide

2:17 pm **O10 MRI Based Non-invasive Detection of Cardiomyocyte Hypertrophy and Cell-volume Changes**
Otavio Coelho-Filho, MD, MPH, State University of Campinas

2:31 pm **O11 Probing Atherosclerotic Angiogenesis with New Manganese-based Nanocolloid for T1-weighted MRI**
Kezheng Wang, MD, PhD, 4th Affiliated Hospital of Harbin Medical University, Washington University School of Medicine - St.Louis

2:45 pm **O12 Accurate Method for Measuring Arterial Pulse Wave Velocity by Cardiovascular Magnetic Resonance**
El-Sayed Ibrahim, PhD, University of Florida

Oral Abstract Session 3 – Clinical Outcome and Prognosis

Crystal Ballroom G1

Moderators: Ingo Eitel, MD, University of Leipzig
Michael McConnell, MD, Stanford University School of Medicine

1:35 pm **O13 Prognostic Value of Delayed Enhancement Cardiovascular Magnetic Resonance in Patients with Sarcoidosis**
Han Kim, MD, Duke University

1:47 pm **O14 Assessment of Warranty Time for Dobutamine Stress Magnetic Resonance Imaging in 3138 Consecutive Patients: A Bi-center Study**
Sebastian Kelle, MD, German Heart Institute Berlin

1:59 pm **O15 Impact of Ejection Fraction on Long-Term Outcome after ST-Elevation Myocardial Infarction – Comparison between Cardiac Magnetic Resonance Imaging and Transthoracic Echocardiography**
Suzanne de Waha, University of Leipzig, Heart Center

2:11 pm **O16 End Systolic Volume and Scar Burden are Incremental and Independent Predictors of Survival in Patients with Severe Ischemic Cardiomyopathy**
Deborah Kwon, MD, Cleveland Clinic

2:23 pm **O17 Gray-zone Late Gadolinium Enhancement Greatly Enriches the Prediction of Ventricular Arrhythmia; A Cardiovascular MRI Study**
Asghar Fakhri, Allegheny General Hospital

2:35 pm **O18 Quantification of Infarct Tissue Heterogeneity and Remote Myocardial Fibrotic Burden during Convalescent Phase After Acute Myocardial Infarction (MI) Provided Strong and Complementary Evidence of Ventricular Arrhythmogenicity from Quantitative Microvolt T-wave Alternans Testing (PROSPECT-CMR Study)**
Bobby Heydari, MD, Brigham and Women's Hospital

2:47 pm **O19 Design and Rationale of the MR-INFORM Study: Stress Perfusion MRI to Guide the Management of Patients with Stable Coronary Artery Disease**
Shazia Hussain, MbChB, Kings College

3:00 pm – 3:30 pm **Refreshment Break** Royal/Sabal Ballrooms

FRIDAY PROGRAM

3:30 pm – 5:00 pm **Concurrent Sessions**

Invited Lecture 4 – Myocardial Perfusion and Ischemia

Sago Ballroom

Moderators: Michael Jerosch-Herold, PhD, Brigham and Women's Hospital
Joseph Selvanayagam, MBBS, DPhil, Adelaide Hospital

Upon completion of this educational activity, the participant should be better able to:

- Better understand the pros and cons of CMR perfusion for ischemia assessment
- Understand why perfusion artifacts occur and how to recognize them and minimize them in clinical practice
- Understand the potential of non-contrast perfusion methods in current practice

3:30 pm **CMR Perfusion Imaging in Clinical Cardiology: Comparison with Other Non-invasive Imaging Modalities**
Timothy Christian, MD, University of Vermont

3:45 pm **How to do CMR Perfusion in Real World Practice: Tricks and Tips**
Sven Plein, MD, PhD, University of Leeds

4:00 pm **Quantitative CMR Perfusion: Does It Add Value?**
Andrew Arai, MD, NHLBI

4:15 pm **Non-contrast Perfusion Methods: Ready for Prime Time?**
Krishna Nayak, PhD, University of Southern California

4:30 pm **Moving Towards Whole-heart Perfusion Imaging with MRI**
Sebastian Kozerke, PhD, Institute for Biomedical Engineering University and ETH Zurich

4:45 pm **Q and A**

Case Review 3 – When CMR Complements Other Modalities

Crystal Ballroom J1

Moderators: Ron Blankstein, MD, Brigham & Women's Hospital
Edward Martin, MD, Oklahoma Heart Institute
Presenters: Joel Wilson, MD, NHLBI
Christopher Miller, MBChB, University of Manchester
Anthon Fuisz, MD, Washington Hospital Center
Edward Hulten, MD, Brigham and Women's Hospital
Scott Bingham, MD, Central Utah Imaging
Juan Batlle, MD, Radiology Associates of South Florida

Oral Abstract Session 4 – Early Career Award - Basic Translational

Crystal Ballroom J2

Moderators: Christopher Kramer, MD, University of Virginia
Gerald Pohost, MD, University of Southern California

3:35 pm **020 Automatic Segmentation of Myocardium at Risk in T2-weighted Cardiovascular Magnetic Resonance**
Jane Sjogren, MSc, Skåne University Hospital

3:49 pm **021 Free-breathing Late Gadolinium Enhancement CMR with a Fixed Short Scan Time Using CosMo**
Mehdi Moghari, Harvard Medical School

4:03 pm **022 Improved Late Gadolinium Enhancement Imaging of Left Ventricle with Isotropic Spatial Resolution**
Mehmet Akcakaya, PhD, Beth Israel Deaconess Medical Center

4:17 pm **023 Interstitial Expansion in Health and Disease – An Equilibrium Contrast CMR Study**
Daniel Sado, MRCP, The Heart Hospital

4:31 pm **024 Quantifying the Area at Risk Using the Infarct Lateral Border: Importance of Infarct Transmurality**
Christoph Jensen, MD, Elisabeth Hospital Essen

4:45 pm **025 Improve of Arrhythmogenic Right Ventricular Cardiomyopathy/Dysplasia Evaluation by Magnetic Resonance Using Ventricular Arrhythmia Suppression with Intravenous Lidocaine**
Afonso Shiozaki, MD, PhD, Maringá Imaging Institute

Oral Abstract Session 5 – DCM and Secondary CMP

Crystal Ballroom J1

Moderators: Herbert Frank, MD, University of Vienna
Subha Raman, MD, The Ohio State University

3:35 pm **027 Non-contrast T1 Mapping Characterizes the Myocardium Beyond That Achieved by Late Gadolinium Enhancement in Both Hypertrophic and Dilated Cardiomyopathy**
Joseph Suttie, MD, University of Oxford

3:47 pm **028 Measurement of Extracellular Volume Fraction by Cardiac Magnetic Resonance Imaging Detects Diffuse Myocardial Fibrosis in Systemic Sclerosis**
Daniel Lee, MD, Northwestern University, Feinberg School of Medicine

3:59 pm **029 Cardiovascular Magnetic Resonance T2 Mapping Detects Myocardial Edema in Patients with Chronic Dilated Cardiomyopathy**
Taigang He, PhD, Royal Brompton Hospital

4:11 pm **030 Left Ventricular Mass by Cardiac Magnetic Resonance Imaging and Adverse Cardiovascular Outcomes in Patients Treated with Anthracycline-based Chemotherapy**
Tomas Neilan, MD, Massachusetts General Hospital

4:23 pm **031 Regional Expression of Myocardial Sheet Dysfunction in Dystrophin-deficient Cardiomyopathy Elucidated with Diffusion Tensor MRI and Optical Calcium Mapping**
Ya-Jian Cheng, MS, Washington University - St. Louis

4:35 pm **032 In-vitro Evaluation of a Novel MR-compatible Cardiac Bioptome Catheter for MR-guided Myocardial Biopsies**
Sebastian Seitz, PhD, University of Heidelberg

5:00 pm – 6:30 pm **Concurrent Sessions**

Invited Lecture 5 - Myocardial Infarction and Area at Risk — Sago Ballroom

Moderators: Christopher Kramer, MD, University of Virginia
Holger Thiele, MD, University of Leipzig

Upon completion of this educational activity, the participant should be better able to:

- Select the optimal MR sequences for myocardial salvage and hemorrhage imaging, and understand all potential pitfalls and artifacts
- Understand the pathophysiology, clinical scenarios, and the prognostic impact influencing myocardial salvage, microvascular obstruction, and hemorrhage in clinical practice
- Have a glimpse into current and future research, understand into which direction research is directed in acute coronary syndromes, and how/when CMR is used in clinical research

5:00 pm **Assessing Myocardial Salvage - State of the Art**
Anthony Aletras, PhD, University of Central Greece

5:20 pm **CMR in Acute Coronary Syndromes for Prognosis Estimation - Infarct Size, Microvascular Obstruction, or Myocardial Salvage. Better than Other Clinical Risk Tools?**
Ingo Eitel, MD, University of Leipzig Heart Center

5:40 pm **Beyond Salvage, Infarct Size and Microvascular Obstruction - Can T2 - or T2*-Weighted Images Identify Hemorrhage?**
Adam Mather, MD, University of Leeds

6:00 pm **Clinical and Research Use of CMR in Acute Coronary Syndromes**
Raymond Kim, MD, Duke Cardiovascular MRI Center

6:20 pm **Q and A**

Case Review 4 - Cardiac Masses: Correlating Imaging with Pathology — Crystal Ballroom J1

Moderators: Carlos Rochitte, MD, Heart Institute – InCor
Ralf Wassmuth, MD, HELIOS-Charite Berlin
Presenters: Joel Wilson, MD, NHLBI
Saad Alhumayyd, MD, University of Toronto

Oral Abstract Session 6 – Comparison to Other Modalities and Cost Effectiveness — Crystal Ballroom J2

Moderators: Otavio Coelho-Filho, MD, MPH, State University of Campinas
Edward Martin, MD, Oklahoma Heart Institute

5:05 pm **033 Can CMR Be the New 'Gold Standard' for Constrictive Pericarditis?**
John Power, University of Rochester, Allegheny General Hospital

5:17 pm **034 Cardiovascular Magnetic Resonance with Late Gadolinium Enhancement Improves Mortality Prediction beyond Echocardiography: A Comparative Effectiveness Study**
Erik Schelbert, MD, University of Pittsburgh

5:29 pm **035 Treadmill Exercise Stress Cardiac MRI for the Assessment of Left Ventricular Wall Motion: A Comparison with Stress Echocardiography in Healthy Volunteers**
Paaladinesh Thavendiranathan, MD, MSc, Cleveland Clinic Foundation

5:41 pm **036 Unrecognized Myocardial Infarction by Echocardiography in Relation to Infarct Characteristics as Assessed by Cardiovascular Magnetic Resonance Imaging**
Caroline Jaarsma, MD, Maastricht University Medical Center

5:53 pm **037 The Effect of Myocardial Fibrosis on Left Ventricular Diastolic Function Assessed by Non-invasive Cardiac Magnetic Resonance and Echocardiography**
Azarakhsh Babolian, MD, Tehran University of Medical Sciences

6:05 pm **038 Validating Feature Tracking MRI for the Assessment of Strain Rate in Patients with Various Hemodynamic States**
Dvorah Holtzman, MD, St. Francis Hospital

6:17 pm **039 Self-gated Cardiac Magnetic Resonance Perfusion Imaging compared with X-ray Angiography: A Pilot Study**
Alexis Harrison, University of Utah

Oral Abstract Session 7 – Vascular MRI: From Research to Clinical Application

Crystal Ballroom G1

Moderators: Jens Bremerich, MD, University Hospital Basel
J. Paul Finn, MD, University of California – Los Angeles

5:05 pm **040 High Resolution Slice-selective Fourier Velocity Encoding Using Spiral SENSE with Velocity Unwrap**
Jennifer Steeden, PhD, UCL

5:17 pm **041 PPACK and Bivalirudin Nanoparticles Enable Simultaneous Imaging and Potent Inhibition of Acute Clotting**
Jacob Myerson, MS, Washington University - St. Louis

5:29 pm **042 Copper Nanocolloids: A New Thrombus Molecular Imaging Approach to Ruptured Plaque**
Dipanjan Pan, Washington University Medical School

5:41 pm **043 Paradoxical Changes in Lumen Size During Progression and Regression of Carotid Atherosclerosis**
Sobhan Kodali, MD, Allegheny General Hospital

5:53 pm **044 Prospective Swallowing Motion Self-gating: A Feasibility Study in Carotid Artery Wall MRI Using 3D Variable-Flip-Angle TSE**
Zhaoyang Fan, PhD, Cedars-Sinai Medical Center

6:05 pm **045 The Feasibility of 350 Micron Spatial Resolution Coronary MRA at 3T in Humans**
Ahmed Gharib, MB, CHB, National Institutes of Health

6:17 pm **046 The Association between Aortic Stiffness Parameters and Left Ventricular Deformation: Preliminary Results from the MESA 5 Study**
Atul Chugh, Johns Hopkins University

6:30 pm – 8:00 pm Royal/Sabal Ballrooms
Moderated Poster Session 1, Poster Session 1, and Wine and Cheese Reception

Saturday, February 4, 2012

6:45 am – 8:00 am Continental Breakfast Royal/Sabal Ballrooms

7:00 am – 8:00 am Physics for Physicians Crystal Ballroom P

7:00 am **Tissue Characterization: T1 Techniques**
Anthony Aletras, PhD, University of Central Greece

7:30 am **Tissue Characterization: T2 and T2* Techniques**
Anthony Aletras, PhD, University of Central Greece

7:00 am – 8:00 am Cardiology for Non-cardiologists Crystal Ballroom M

7:00 am **Clinical Uses of Myocardial T1 Imaging**
Subha Raman, MD, The Ohio State University

7:30 am **Clinical Uses of Myocardial T2 and T2* Imaging**
Subha Raman, MD, The Ohio State University

8:00 am – 9:30 am Concurrent Sessions

Invited Lecture 6 - Interventional MRI - Vascular and Structural Heart Disease

Sago Ballroom

Moderators: Anthony Faranesh, PhD, NHLBI
Harald Quick, PhD, Institute of Medical Physics

Upon completion of this educational activity, the participant should be better able to:

- Recognize recent advances in CMR of congenital heart disease
- Understand the strength and weaknesses of computer modeling based on CMR data
- Be familiar with the use of CMR for fetal cardiac evaluation

8:00 am **Interventional Cardiovascular MRI**
Robert Lederman, MD, NHLBI

8:15 am **Fusing MRI and Ultrasound for Intervention Guidance**
Reza Razavi, MD, King's College London

8:30 am **Fusing MRI and X-Ray for Stem Cell Therapies**
Amish Raval, MD, University of Wisconsin Medical School

8:45 am **Devices for iMRI in Vascular / Valvular Procedures**
Harald Quick, PhD, Institute of Medical Physics

9:00 am **Real-time MRI for Interventional Guidance**
Juan Santos, PhD, Stanford University

9:15 am **Q and A**

Case Review 5 - Myocardial Inflammation: What is the Diagnosis?

Crystal Ballroom J1

Moderators: Julio Chirinos, MD, University of Pennsylvania
Albert de Roos, MD, PhD, Leiden University Medical Center
Presenters: Birgit Langhans, MD, Deutsches Herzzentrum München
Elizabeth Joseph, MBBS, DMRD, DNB, CMC Vellore
Filip Zemrak, MD, MRCP, The London Chest Hospital

Oral Abstract Session 8 – Novel Techniques for Clinical Application

Crystal Ballroom J2

Moderators: Anthony Aletras, MD; University of Central Greece
Sven Plein, MD, PhD, University of Leeds

8:05 am **047 Validation of Dynamic Three-dimensional Whole Heart Magnetic Resonance Myocardial Perfusion Imaging against Single Photon Emission Computed Tomography for the Detection of Functionally Significant Coronary Heart Disease**
Roy Jogiya, MBBS, King's College London

8:17 am **048 Quantification of Myocardial Perfusion Based on Signal Intensity of Flow Sensitized MRI**
Sumeda Abeykoon, MS, University of Cincinnati

8:29 am **049 Diffusion MRI Tractography of the Human Heart (In Vivo) at End-Diastole and End-Systole**
Choukri Mekkaoui, Harvard Medical School

8:41 am **050 Cardiac Magnetic Resonance Myocardial Feature Tracking Correlates with Natural Radial Strain and Corresponds to Inotropic Stimulation**
Andreas Schuster, MD, King's College London

8:53 am **051 Quantitative Free-breathing 3T T2-mapping of the Heart Designed for Longitudinal Studies**
Ruud B. Van Heeswijk, PhD, University Hospital Lausanne (CHUV)

9:05 am **052 Slice-selective Implementation of an Adiabatic T2 Prep Sequence Increases Coronary Artery Conspicuity at 3T**
Sahar Soleimanifard, MSE, Johns Hopkins University

9:17 am **053 Highly Effective Fat Suppression in Clinical T1-Weighted Imaging of Ischemic and Non-Ischemic Heart Disease with DeSPAIR**
Wolfgang Rehwald, PhD, Siemens Healthcare, Duke University Medical Center

Oral Abstract Session 9 – Congenital Heart Disease 1

Crystal Ballroom G1

Moderators: James Nielsen, MD, Mt. Sinai School of Medicine
Emanuela Valsangiacomo, MD, University Children's Hospital

8:05 am **054 Diagnostic Accuracy of Post-mortem Cardiovascular Magnetic Resonance Imaging in Fetuses, Newborns, and Children**
Andrew Taylor, MD, UCL Institute of Cardiovascular Science

8:17 am **055 Normal Values of Aortic Dimensions, Distensibility, and Pulse Wave Velocity in Children and Young Adults**
Inga Voges, MD, University Hospital Schleswig-Holstein

8:29 am **056 Fully-automatic, Patient-specific 3D Aortic Arch Modeling for Patient Treatment with Aortic Arch Anomalies**
Benedetta Leonardi, MD, Bambino Gesù Pediatric Hospital

8:41 am **057 Cardiac Magnetic Resonance Imaging and Gadolinium Angiography for Neonates and Small Infants: A 10-Year Single Institutional Experience**
Sheela Rangamani, University of Nebraska/Creighton University, Joint Division of Pediatric Cardiology, Children's Hospital and Medical Center

8:53 am **058 Equilibrium Contrast Cardiovascular Magnetic Resonance Shows Increased Interstitial Expansion in the Systemic Right Ventricle of Adults Late after Mustard or Senning Surgery for Transposition of the Great Arteries**
Daniel Sado, MRCP, The Heart Hospital

9:05 am **059 Reduced Global Longitudinal and Radial Strain with Normal Left Ventricular Ejection Fraction Late after Effective Repair of Aortic Coarctation - A CMR Feature Tracking Study**
Shelby Kutty, Joint Division of Pediatric Cardiology, University of Nebraska College of Medicine/ Creighton University School of Medicine, Children's Hospital and Medical Center

9:17 am **060 CMR Adenosine Stress Perfusion in Pediatrics and Congenital Heart Disease: Effects on Clinical Decision Making and Outcomes**
Michael Campbell, MD, Duke University Medical Center

9:30 am – 10:00 am **Refreshment Break** Royal/Sabal Ballrooms

10:00 am – 11:30 am **Concurrent Sessions**

Invited Lecture 7 - Advanced CMR Techniques in Pediatric/Congenital Heart Disease

Sago Ballroom

Moderators: Andrew Powell, MD, Children's Hospital Boston
Andrew Taylor, MD, UCL Institute of Child Health

Upon completion of this educational activity, the participant should be better able to:

- Recognize recent advances in CMR of congenital heart disease
- Understand the strength and weaknesses of computer modeling based on CMR data
- Familiarize themselves with the use of CMR for fetal cardiac evaluation

10:00 am **4D Flow: Current Applications, Limitations, and Future Prospects**
Michael Hope, MD, University of California – San Francisco

10:15 am **Pre-intervention Computer Modeling in Congenital Heart Disease: From Computers to Practice**
Ajit Yoganathan, PhD, Georgia Institute of Technology

10:30 am **Advances in Time-resolved Angiography-Temporal vs Spatial Resolutions**
Gerald Greil, MD, King's College London

10:45 am **Real-time Imaging in Congenital Heart Disease**
Vivek Muthurangu, MD, UCL Institute of Child Health and Great Ormond Street Hospital

11:00 am **Fetal CMR: Technical Challenges and Current Applications**
Michael Seed, MBBS, The Hospital for Sick Children

11:15 am **Q and A**

Invited Lecture 8 - Non-Ischemic Cardiomyopathies 2

Crystal Ballroom J2

Moderators: Patricia Bandettini, MD, NHLBI
Sven Plein, MD, PhD, University of Leeds

Upon completion of this educational activity, the participant should be better able to:

- Understand the differential diagnosis of non-ischemic cardiomyopathy
- Use CMR appropriately to diagnose non-ischemic cardiomyopathies
- Understand the role of CMR in the risk-stratification of patients with non-ischemic cardiomyopathies

10:00 am **Non-Ischemic Cardiomyopathy – Diagnostic Challenges, New Techniques**
James Moon, MD, The Heart Hospital

10:15 am **Diagnostic and Prognostic Utility of CMR in Infiltrative Cardiomyopathies**
Frederick Ruberg, MD, Boston University School of Medicine

10:30 am **Moving Beyond Pretty Pictures: The Current and Emerging Clinical Role of CMR in Hypertrophic Cardiomyopathy**
Martin Maron, MD, Tufts University

10:45 am **Latest Advances in CMR of Iron Overload Cardiomyopathy**
Dudley Pennell, MD, Royal Brompton Hospital

11:00 am **Diastolic Heart Function: Current and Future Clinical Imaging Approaches**
Hildo Lamb, MD, PhD, Leiden University Medical Center

11:15 am **Q and A**

Case Review 6 – Best Cases from the SCMR Website

Crystal Ballroom J1

Moderators: Chiara Bucciarelli, MD, Royal Brompton Hospital
Robert Rollings, MD, Savannah Cardiology

Oral Abstract Session 10 – CAD Acute Myocardial Injury

Crystal Ballroom G1

Moderators: Andrew Arai, MD, NHLBI
Holger Thiele, MD, University of Leipzig

10:05 am **061 Detecting Acute Reperfusion Myocardial Hemorrhage with CMR: A Translational Study**
Avinash Kali, MS, University of California - Los Angeles

10:17 am **062 Diagnostic Performance of T2-Weighted CMR for Evaluation of Acute Myocardial Injury**
Monvadi Srichai, MD, NYU School of Medicine

10:29 am **063 Understanding Why Edema in Salvaged Myocardium Is Difficult to Detect by Late Gadolinium Enhancement**
Martin Ugander, MD, PhD, National Institutes of Health

10:41 am **064 Recovery of Regional Myocardial Function and Myocardial Oedema Following Reperfused Acute Myocardial Infarction**
Ananth Kidambi, BMBCh MRCP, University of Leeds

10:53 am **065 Comparison between Magnetic Resonance Imaging and Single-Photon Emission Tomography for the Assessment of Myocardial Salvage after Coronary Revascularization in Acute Myocardial Infarction**
Martin Hadamitzky, MD, Deutsches Herzzentrum München

11:05 am **066 Correlation of CMR and Biochemical Markers of Myocardial Injury in a Multi-centre Study: PROTECTION AMI CMR Sub-study**
Suchi Grover, MBCHB, Flinders Medical Centre, Flinders University

11:17 am **067 Impact of Chronic Statin-pretreatment on Myocardial Damage as Assessed by Cardiac Magnetic Resonance Findings in Patients with Acute ST-elevation Myocardial Infarction**
Georg Fuernau, MD, University of Leipzig - Heartcenter

11:30 am – 12:30 pm Royal/Sabal Ballrooms

Moderated Poster Session 2, Poster Session 2, Exhibits, Lunch (on own)

12:30 pm – 2:00 pm Concurrent Sessions

Invited Lecture 9 - High Throughput CMR (Protocol Optimizing): Improving Quantification and Reproducibility

Sago Ballroom

Moderators: Tobias Schaeffter, PhD, King's College London
Holger Thiele, MD, University of Leipzig

Upon completion of this educational activity, the participant should be better able to:

- Select the appropriate MR sequences for different cardiovascular pathologies
- Understand the factors that influence the quality and reproducibility of different CMR protocols
- Decide between required quality and related scan time to enable a higher throughput of CMR in clinical practice

12:30 pm **Optimal Imaging Protocols for Ischemia Detection in < 30 Minutes**
Matthias Friedrich, MD, Université of Montréal

12:45 pm **Reliable Imaging Protocols for Delayed Enhancement and Edema Imaging**
Orlando Simonetti, PhD, The Ohio State University

1:00 pm **High Throughput CMR In Clinical Practice - Tips and Tricks to Get You through the Day**
Scott Flamm, MD, Cleveland Clinic

1:15 pm **Dedicated CMR Protocols in the Evaluation of Acute Coronary Syndromes**
Ricardo Cury, MD, Radiology Associates of South Florida

1:30 pm **Screening Adult Survivors of Childhood Cancer for Cardiomyopathy**
Gregory Armstrong, MD, St. Jude Children's Research Hospital

1:45 pm **Q and A**

Case Review 7 - Perfusion Imaging by CMR: Both Usual and Unusual Cases

Crystal Ballroom J1

Moderators: David A. Bluemke, MD, PhD, National Institutes of Health
Dipan J. Shah, MD, Methodist DeBakey Heart & Vascular Center
Presenters: Helen Mathias, MD, Bristol Heart Institute
Paul Chacko, MD, The Ohio State University
Michael Salerno, MD, PhD, University of Virginia

Oral Abstract Session 11 – Congenital Heart Disease 2

Crystal Ballroom J2

Moderators: Kan Hor, MD, Cincinnati Children's Hospital Medical Center
Rajesh Krishnamurthy, MD, Texas Children's Hospital

12:35 pm **068 Aortic Dimensions on Cardiovascular Magnetic Resonance Imaging Relate to Pregnancy Outcomes in Women with Coarctation of the Aorta: A Multicenter Study**
Laura Jimenez Juan, MD, Toronto General Hospital

12:47 pm **069 Cardiac Magnetic Resonance Differentiates Subtypes in Bicuspid Aortic Valve and Reveals Various Frequencies of Aortic Stenosis among Subtypes**
Ralf Wassmuth, MD, Helios Klinikum and Charite University Medicine Berlin

12:59 pm **070 Multimodality Assessment of Aortic Stenosis Severity in Transcatheter Aortic Valve Implantation (TAVI): Comparison Between Cardiovascular Magnetic Resonance, Transesophageal and Transthoracic Echocardiography**
Andrew Jabbour, Cardiology Fellow, Royal Brompton and Harefield NHS Foundation Trust, Imperial College London

1:11 pm **071 The Effect of Myocardial Fibrosis on Ventricular Remodeling Following Valve Replacement for Severe Aortic Stenosis. A CMR Study Comparing Transcatheter Aortic Valve Implantation and Surgical Aortic Valve Replacement**
Timothy Fairbairn, MBChB, University of Leeds

1:23 pm **072 Potential of Pre-contrast T1 Mapping as a Marker of Interstitial Fibrosis in Severe Aortic Stenosis**
Andrew Jabbour, Cardiology Fellow, Royal Brompton and Harefield NHS Foundation Trust, Imperial College London

1:35 pm **073 PINOT NOIR: Pulmonic INsufficiency ImprOvemenT with Nitric Oxide Inhalational Response**
Scott Flamm, MD, Cleveland Clinic, Cleveland Clinic

Oral Abstract Session 12 – Stepping into New Insights: Enhancing Our Understanding

Crystal Ballroom G1

Moderators: Michael Markl, PhD, Northwestern University;
Florian von Knobelsdorf, MD, Charité Medical University Berlin

12:35 pm **074 Cine-ASL: A New Arterial Spin Labeling Method for Myocardial Perfusion Mapping in Mice Using a Cine-FLASH Labeling and Readout Module**
Thomas Troalen, MD, Centre de Résonance Magnétique Biologique et Médicale

12:47 pm **075 Derangement of Cardiac Energy Metabolism Is Acutely Exacerbated during Exercise in Hypertrophic Cardiomyopathy, Independent of Hypertrophy or Late Gadolinium Burden**
Joseph Suttie, MD, University of Oxford

12:59 pm **076 Pre-contrast ShMOLLI T1 Mapping in Cardiac AL Amyloidosis**
Theodoros Karamitsos, MD, PhD, University of Oxford Centre for Clinical Magnetic Resonance Research (OCMR)

1:11 pm **077 Determine the Myocardial T2* Cut-off Value in Thalassemia Using Gaussian Mixtures Models**
Taigang He, PhD, Royal Brompton Hospital

1:23 pm **078 Mechanistic Insights and Characterization of Cardiomyopathy Due to Sickle Cell Disease**
Amit Patel, MD, University of Chicago

1:35 pm **079 Is There an Alternative Explanation to Post-MI Emergence of Mitral Regurgitation; A CMR-LGE Observational Study**
Hari Bogabathina, MD, Allegheny General Hospital

1:47 pm **080 Decreased Exercise Capacity in 'Asymptomatic' Patients Late after Relief of Severe Pulmonary Stenosis and Moderate Restenosis: Evidence for Diastolic Dysfunction**
Soha Romeih, MD, Academic Medical Center

2:00 pm – 2:30 pm **Refreshment Break** Royal/Sabal Ballrooms

2:30 pm – 4:00 pm **Concurrent Sessions**

Invited Lecture 10 - CMR Applications in Cardiac Electrophysiology Sago Ballroom
Moderators: Thomas Hauser, MD, Beth Israel Deaconess Medical Center
Tobias Schaeffter, PhD, King's College London
Upon completion of this educational activity, the participant should be better able to:
- Describe the role of CMR for management of patients with cardiac arrhythmia
- Understand how CMR-data can be used in planning a cardiac resynchronization therapy (CRT) procedure
- Understand the benefits of using CMR data for treatment of atrial fibrillation

2:30 pm **Evaluation of Pulmonary Vein Anatomy before and after AF Ablation**
Thomas Hauser, MD, MPH, Beth Israel Deaconess Medical Center

2:45 pm **Late Gadolinium Enhancement of the Left Atrium**
Nassir Marrouche, MD, University of Utah

3:00 pm **Substrate Evaluation for VT Ablation**
Saman Nazarian, MD, Johns Hopkins Outpatient Clinic

3:15 pm **CRT and Coronary Vein Imaging**
John Oshinski, PhD, Emory University Hospital

3:30 pm **Image Integration for Electrophysiology Procedures**
Kawal Rhode, PhD, King's College London

3:45 pm **Q and A**

Case Review 8 - Surprising Findings in Valvular Disease Crystal Ballroom J1
Moderators: Marcus Chen, MD, NHLBI
Albert van Rossum, MD, PhD, VU Medical Center
Presenters: Manish Motwani, BSc, MBChB, University of Leeds
Timothy Wong, MD, University of Pittsburgh School of Medicine
Christoph Jensen, MD, Elisabeth Hospital Essen
Elisa McAlindon, MD, Bristol Heart Institute
Robert Quaife, MD, University of Colorado
Roshan Weerackody, MD, The Barts and The London NHS Trust
Federico Mordini, MD, Washington DC VA Medical Center
Sujata Shanbhag, MD, NHLBI

Oral Abstract Session 13 - Non-ischemic Heart Disease: A Wide Spectrum from Technique to Disease Crystal Ballroom J2
Moderators: Daniel Messroghli, MD, Deutsches Herzzentrum Berlin
Nathaniel Reichek, MD, St. Francis Hospital

2:35 pm **081 T2-mapping in Normal Volunteers Compared to Patients with Edema Reveals Wide Range of Myocardial T2 in Female Volunteers**
Ralf Wassmuth, MD, Helios Klinikum and Charite University Medicine Berlin

2:47 pm **082 Application of a High Resolution T1 Mapping with MOLLI (hrMOLLI) in Patients in Clinical Setting: A Reproducibility Study**
Valentina Puntmann, King's College London

2:59 pm **083 Quantitative T1 Mapping and the Fibrotic Index in Normal Healthy Volunteers; Relationship to Aging and Cardiac Dimensions**
Tomas Neilan, MD, Brigham and Women's Hospital

3:11 pm **084 Diabetics Without Prior Cardiovascular Disease have Diffuse Interstitial Fibrosis by CMR Independent of Clinical Risk Factors**
Ravi Shah, MD, Brigham and Women's Hospital

3:23 pm **085 Cardiovascular Changes in Patients with Acromegaly Assessed by CMR**
Filip Zemrak, MD, MRCP, The London Chest Hospital

3:35 pm **086 Trabeculated (Non-compacted) and Compact Myocardium in Adults: The Multi-Ethnic Study of Atherosclerosis**
Nadine Kawel, MD, National Institutes of Health

3:47 pm **087 Patterns of Late Gadolinium Enhancement in 94 Patients with AL or Transthyretin Cardiac Amyloidosis**
Jason Dungu, BSc, MBBS, St George's University of London

Oral Abstract Session 14 – CAD: Assessment of Perfusion – Routine Patient Care and Research

Crystal Ballroom G1

Moderators: Victor Ferrari, MD, University of Pennsylvania
Eike Nagel, MD, PhD, King's College London

2:35 pm **088 The Factors Limiting the Diagnostic Accuracy of Myocardial Perfusion Cardiac Magnetic Resonance Imaging: Coronary Flow Reserve and Amount of Myocardial Scar**
Masaki Ishida, MD, PhD, Mie University Hospital

2:47 pm **089 High-Resolution versus Standard-resolution Cardiovascular Magnetic Resonance Perfusion Imaging for the Detection of Coronary Artery Disease**
Manish Motwani, BSc, MBChB, University of Leeds

2:59 pm **090 Transmural Perfusion Gradient Analysis by High-resolution MR versus Fractional Flow Reserve for the Assessment of Coronary Artery Stenosis**
Amedeo Chiribiri, MD, King's College London

3:11 pm **091 Validation of Dynamic Three-dimensional Whole Heart Magnetic Resonance Myocardial Perfusion Imaging at 3.0 Tesla Against the Duke Jeopardy Score to Assess Myocardium at Risk**
Roy Jogiya, MBBS, King's College London

3:23 pm **092 Validation of Dynamic Three-dimensional Whole Heart Magnetic Resonance Myocardial Perfusion Imaging at 3.0 Tesla Against Fractional Flow Reserve for the Detection of Flow-Limiting Coronary Heart Disease**
Roy Jogiya, MBBS, King's College London

3:35 PM **093 Cardiovascular Magnetic Resonance Stress Perfusion Compared to Single Photon Emission Computed Tomography (SPECT) in Patients with Left Main Stem Disease: a CE-MARC Substudy**
Ananth Kidambi, BMBCh MRCP, Multidisciplinary Cardiovascular Research Centre & Leeds Institute of Genetics, Health and Therapeutics

3:47 PM **094 The Role of Cardiovascular Magnetic Resonance in Women with Suspected CAD: a CE-MARC Sub-study**
Manish Motwani, BSc, MBChB, University of Leeds

4:00 pm – 5:30 pm Concurrent Sessions

Invited Lecture 11 - Emerging CMR Technology

Sago Ballroom

Moderators: Daniel Ennis, PhD, University of California – Los Angeles
Krishna Nayak, PhD, University of Southern California

Upon completion of this educational activity, the participant should be better able to:

- Recognize and recall five emerging CMR technologies
- Summarize the rationale and applications for each of them
- Critique the advantages and disadvantages of the current state-of-the-art

4:00 pm **7T CMR: Technology and Applications**
Jeanette Schulz-Menger, MD, Charite Universitatsmedizin Berlin

4:15 pm **CMR Compressed Sensing: Technology and Applications**
Shreyas Vasanawala, PhD, Stanford University

4:30 pm **Using Hyperpolarized 13C to Study Cardiac Metabolism**
Charles H. Cunningham, PhD, University of Toronto

4:45 pm **Advances in MRA with Blood-pool Contrast Agents**
Philipp Moritz Wagner, MD, Charite - University Hospital Berlin

5:00 pm **Free Breathing, Motion Corrected, High-Resolution Exams**
Michael Hansen, PhD, National Institutes of Health

5:15 pm **Q and A**

Case Review 9 – Congenital Heart Disease 2

Crystal Ballroom J1

Moderators: Sohrab Fratz, MD, Deutsches Herzzentrum München
Kevin Whitehead, MD, PhD, Children's Hospital of Philadelphia
Presenters: Andrew Crean, MD, Toronto General Hospital
Adam Dorfman, MD, University of Michigan
Michael Puchalski, MD, Primary Children's Medical Center
Ruchira Garg, MD, Miami Children's Hospital
Pierluigi Festa, MD, FTGM, Massa, Italy
Tiffanie Johnson, MD, Riley Hospital for Children
Anne Marie Valente, MD, Children's Hospital Boston

Oral Abstract Session 15 – Hypertrophic Cardiomyopathy

Crystal Ballroom J2

Moderators: Martin Maron, MD, Tufts
Sanjay Prasad, MD, Royal Brompton Hospital

4:05 pm **O95 Not All LGE Is the Same. Scar Contrast Volume of Distribution Is Lower in HCM than in Infarction**
Thomas Treibel, MBBS, University College London

4:17 pm **O96 Subtle Structural Abnormalities in Genotype Positive Phenotype 'Negative' Patients with Pre-clinical Hypertrophic Cardiomyopathy (HCM): A Blinded, Controlled Cardiovascular Magnetic Resonance (CMR) Study**
Djeven Deva, FRCR, MRCSI, MB BCh, University Health Network

4:29 pm **O97 The Relationship Between Interstitial Fibrosis and Contractile Function in HCM: A Combined T1-Mapping and CSPAMM Tagging Study**
Tevfik Ismail, BSc(Hons), MB BS, MRCP, Royal Brompton Hospital

4:41 pm **O98 Quantitative of Myocardial Extracellular Volume Fraction Improves Characterization of Fibrotic Burden in Patients with Apical Hypertrophic Cardiomyopathy Beyond Visual Assessment with Late Gadolinium Enhancement**
Eri Watanabe, MD, PhD, Brigham and Women's Hospital

4:53 pm **O99 Characterization of Patients with Massive Hypertrophic Cardiomyopathy Using Contrast-enhanced Magnetic Resonance Imaging: Does Contrast Provide Additional Information?**
Raymond Chan, MD, Beth Israel Deaconess Medical Center

5:05 pm **O100 T2 Abnormalities in Patients with Hypertrophic Cardiomyopathy Characterized by Cardiovascular Magnetic Resonance Imaging: An Indicator of Myocardial Injury as Assessed by the High Sensitive Cardiac Troponin T Assay**
Stephanie Lehrke, MD, Ev.- Lutherische Diakonissenanstalt Flensburg

5:17 pm **O101 A Systematic Review for Sudden Cardiac Death in Hypertrophic Cardiomyopathy Patients with Myocardial Fibrosis: A CMR LGE Study**
Nackle Silva, Allegheny General Hospital

Oral Abstract Session 16 - Arrhythmias, EP, and Interventional Applications Crystal Ballroom G1
Moderators: Alexander Dick, MD, Sunnybrook Health Sciences Centre
Ehud Schmidt, PhD, Brigham and Women's Hospital

4:05 pm **O102 Cardiac MRI Is Safe In Patients with Pacemakers and Defibrillators**
Alex Baher, MD, The Methodist Hospital

4:17 pm **O103 Interactive Real-time Mapping and Ablation of the Pulmonary Veins and Cavotricuspid Isthmus in an Ovine Model with an Externally-irrigated MRI-compatible Ablation Catheter**
Anand Ganesan, MBBS, PhD, University of Adelaide

4:29 pm **O104 Correlation of Cardiac Magnetic Resonance Imaging and Electrophysiology Study Findings among Patients with Frequent Premature Ventricular Contractions**
Adam Helms, MD, University of Michigan

4:41 pm **O105 CMR Measurements of Myocardial Infarct Heterogeneity Using MCLE and IR-FGRE: Correlation with Arrhythmia Inducibility and Severe ICD Events in Patients with Ischemic Heart Disease**
Yuesong Yang, MD, PhD, Sunnybrook Health Sciences Centre

4:53 pm **O106 Regional Thickness of the Compacted and Trabeculated Layers of the Left Ventricle in Young Patients Presenting with Ventricular Dysrhythmias, A Cardiac MRI Study**
Moneal Shah, MD, Allegheny General Hospital

5:05 pm **O107 Dependence of Contrast to Noise Ratio between Ablation Scar and Other Tissues on Patient Heart Rate and Flip Angle for Late Gadolinium Enhancement Imaging of the Left Atrium**
Sathya Vijayakumar, MS, University of Utah

5:17 pm **O108 Characteristics of Right Ventricular Free Wall Motion in Young Patients with Ventricular Arrhythmia, A Cardiac MRI Study**
Daniel Katz, MD, St. Francis Hospital

5:30 pm – 6:00 pm **CMR Technology Updates** Sago Ballroom

6:00 pm – 6:30 pm **Presentation of Awards** Sago Ballroom

6:30 pm – 8:00 pm **Awards Reception** Crystal Ballroom H

Sunday, February 5, 2012

6:45 am – 8:00 am Continental Breakfast — Palms Ballroom Foyer

7:00 am – 8:00 am Physics for Physicians — Crystal Ballroom P

7:00 am Fast Imaging – When and How?
Daniel Ennis, PhD, University of California – Los Angeles

7:30 am Fast Imaging – Who and Why?
Dipan Shah, MD, Methodist DeBakey Heart & Vascular Center

7:00 am – 8:00 am Cardiology for Non-cardiologists — Crystal Ballroom M

7:30 am Roundtable Case Presentations
Dipan Shah, MD, Methodist DeBakey Heart & Vascular Center
Afshin Farzaneh-Far, MD, PhD, University of Illinois

8:00 am – 9:30 am Concurrent Sessions

Invited Lecture 12 – Cost Effectiveness of CMR — Sago Ballroom

Moderators: Rory Hachamovitch, MD, MSc, Cleveland Clinic
Raymond Kwong, MD, MPH, Brigham and Women's Hospital

Upon completion of this educational activity, the participant should be better able to:

- Understand the approaches used to evaluate the role and effectiveness of CMR
- Understand the methodologies used to assess the cost-effectiveness of cardiovascular testing
- Understand how physicians' use of testing can be assessed

8:00 am Use of Decision Analysis in Assessing the Cost Effectiveness of CMR
Raymond Kwong, MD, MPH, Brigham and Women's Hospital

8:15 am Observational Studies vs RCT for Defining the Role of CMR
Leslee Shaw, PhD, Emory University

8:30 am Assessing Referring Physician Use of CMR
Rory Hachamovitch, MD, MSc, Cleveland Clinic

8:45 am Enhancing MD Expertise in Cardiac Imaging: Will European Diplomat of Cardiac Radiology Make a Difference?
Jens Bremerich, MD, University Hospital Basel

9:00 am CMR More Cost-effective than Invasive Coronary Angiography in Assessing Cardiomyopathy?
Sanjay Prasad, MD, Royal Brompton Hospital

9:15 am Q and A

Invited Lecture 13 - Informing Clinical Decisions in Congenital Heart Disease — Crystal Ballroom J2

Moderators: Philipp Beerbaum, MD, PhD, King's College London
Taylor Chung, MD, Children's Hospital and Research Center Oakland

Upon completion of this educational activity, the participant should be better able to:

- Utilize CMR data to determine timing and indications of pulmonary valve replacement in repaired tetralogy of Fallot
- Understand the principles and practical challenges in stress CMR in pediatrics
- Employ CMR in the evaluation of patients with single ventricle physiology

8:00 am Role of CMR in Timing and Outcomes of Pulmonary Valve Replacement
Tal Geva, MD, Children's Hospital Boston

8:15 am Stress MR in Congenital Heart Disease - Evidence for Added Clinical Value
Willem Helbing, MD, Erasmus Medical Center

8:30 am Scarring and Diffuse Fibrosis: So What?
Craig Broberg, MD, Oregon Health and Sciences University

8:45 am Can CMR Alone Be Used to Assess Single Ventricle Patients before TCPC?
Mark Fogel, MD, Children's Hospital of Philadelphia

9:00 am Single or Biventricular Management of Complex Congenital Heart Disease: What Can CMR Offer?
Lars Grosse-Wortmann, MD, Hospital for Sick Children

9:15 am Q and A

Case Review 10 - Interactive CMR Cases - State of the Heart — Crystal Ballroom J1

Moderators: James Moon, MRCP, The Heart Hospital
Mark Westwood, MD, MRCP, The London Chest Hospital
Presenters: Thomas Burchell, MD, The London Chest Hospital
Neha Sekhri, MD, The London Chest Hospital
Marianna Fontana, MD, The Heart Hospital
Viviana Maestrini, MD, The Heart Hospital
Amedeo Chiribiri, MD, King's College London

Oral Abstract Session 17 - Novel Techniques - Assessment of the Myocardium — Crystal Ballroom G1

Moderators: Thoralf Niendorf, PhD, Max-Delbrueck-Center for Molecular Medicine
Milind Desai, MD, Cleveland Clinic

8:05 am **O109 Imaging Contrast Agent Concentration and Extracellular Volume Fraction in the Right Ventricle**
Joseph Pagano, MD, University of Alberta

8:17 am **O110 Accelerated and Navigator-gated Look-locker Imaging for Cardiac T1 Estimation (ANGIE) with Reduced Motion Artifact**
Bhairav Mehta, University of Virginia

8:29 am **O111 Histological Validation of ShMOLLI Equilibrium Contrast CMR for the Measurement of Diffuse Myocardial Fibrosis**
Steven White, The Heart Hospital

8:41 am **O112 T2 Mapping of the Heart with High Temporal and Spatial Resolution Using a Radial Double Inversion Fast Spin-echo Pulse Sequence with View Sharing**
Maria Altbach, PhD, University of Arizona

8:53 am **O113 Assessment and Improvement of Image Homogeneity in Black- Blood T2-weighted Turbo Spin-Echo CMR**
Benjamin Wince, MD, Medical University of South Carolina

9:05 am **O114 Myocardium at Risk by Magnetic Resonance Imaging: Head-to-head Comparison of T2-Weighted Imaging and Early Gadolinium Enhanced Steady State Free Precession**
Joey Ubachs, MD, PhD, Lund University Hospital

9:17 am **O115 Novel Magnetic Resonance Imaging Marker of Diffuse Myocardial Fibrosis in Hypertensive Heart Disease: The Role of Transcytolemmal Water-Exchange**
Otavio Coelho-Filho, MD, State University of Campinas

9:30 am – 10:00 am **Refreshment Break** Royal/Sabal Ballrooms

10:00 am – 11:30 am **Concurrent Sessions**

Invited Lecture 14 - CMR Safety - Contrast Agents, Medical Devices, and Issues Related to High Field Strengths

Sago Ballroom

Moderators: David Bluemke, MD, PhD, National Institutes of Health
Jeanette Schulz-Menger, MD, Charite Universitatsmedizin Berlin

Upon completion of this educational activity, the participant should be better able to:

- Describe safety concerns for patients with pacemakers and ICDs who require MRI1
- Understand the major risk factors for nephrogenic systemic fibrosis
- Describe MRI contrast agents that are available and their off-label use in cardiac MRI
- Understand the potential for high field MRI and its challenges related to safety and image quality

10:00 am **Pacemakers and ICD**
Pro: Henry Halperin, MD, MA, Johns Hopkins University School of Medicine
Con: Frank Shellock, PhD, University of Southern California

10:30 am **Contrast Agents and NSF**
Martin Prince, MD, PhD, Cornell University

10:45 am **Overview of Contrast Agents and Dose, Safety (non-NSF)**
Marcelo Nacif, MD, National Institutes of Health

11:00 am **CMR at High and Ultra-high Field Strengths: Hype or Hope?**
Thoralf Niendorf, PhD, Max Delbrueck Center for Molecular Medicine

11:15 am **Q and A**

Invited Lecture 15 - Towards Patient Specific Quantitative CMR and Computational Models of Cardiovascular Flow and Function

Crystal Ballroom J1

Moderators: Daniel Ennis, PhD, University of California – Los Angeles
Michael Markl, PhD, Northwestern University

Upon completion of this educational activity, the participant should be better able to:

- Identify and critically evaluate new methods and applications for the comprehensive evaluation of blood flow in the cardiovascular system
- Describe and critique both novel and established methods for the assessment of regional cardiac function and their potential clinical applications
- Understand the emerging role of patient specific computational modeling techniques for the analysis of cardiac function and blood flow

10:00 am **Quantitative 4D PC-MRI for Cardiovascular Flow: Techniques, Applications & Pitfalls**
Petter Dyverfeldt, PhD, University of California – San Francisco

10:15 am **Potential of Computational 4D Fluid Dynamics in Cardiovascular Disease**
Ajit Yoganathan, PhD, Georgia Institute of Technology

10:30 am **Quantitative Techniques for Measuring Cardiac Motion**
Andreas Sigfridsson, PhD, Linköping University

10:45 am **Regional Myocardial Kinematics: Emerging Clinical Applications**
Frederick Epstein, PhD, University of Virginia

11:00 am **Putting It All Together: Toward Patient Specific Computational Modeling of Cardiac Electromechanics and Flow**
Nic Smith, PhD, King's College London

11:15 am **Q and A**

Invited Lecture 16 - CMR Imaging in Pre-clinical Research and Drug Development

Crystal Ballroom J2

Moderators: Håkan Arheden, MD, PhD, Lund University Hospital
Rob van der Geest, PhD, Leiden University Medical Center

Upon completion of this educational activity, the participant should be better able to:

- Describe different techniques and applications of preclinical CMR
- Understand the challenges of CMR in different animals models
- Understand the role of preclinical MRI in drug development and translation research

10:00 am **Pre-clinical Cardiac MRI in Pharmaceutical Research: Current Status and Perspectives**
Beat Jucker, PhD, GlaxoSmithKline

10:15 am **Small Animal Models in Cardiac MRI**
Brent French, PhD, University of Virginia

10:30 am **Large Animal Models in Cardiovascular MRI**
James Hamilton, PhD, Boston University

10:45 am **Assessment of Plaque Burden and Treatment Efforts with MRI**
Allan Moody, MBBS, Sunnybrook Health Sciences Centre

11:00 am **MR Imaging in Translational Studies of Cardio-protection**
Marcus Carlsson, PhD, Lund University Hospital

11:15 am **Q and A**

Invited Lecture 17 - Interventional MRI – Electrophysiology

Crystal Ballroom G1

Moderators: Reza Razavi, MD, King's College London
Graham Wright, PhD, Sunnybrook Health Sciences Centre

Upon completion of this educational activity, the participant should be better able to:

- Learn the current status of image guidance for electrophysiology (EP) procedures
- Understand the technical aspects of MR-guided EP procedures
- Identify remaining technical and clinical challenges for transferring experimental MR-guided EP procedures into a clinical setting

10:00 am **State-of-the-Art in Image Guidance for EP Ablations**
Srijoy Mahaptra, MD, St. Jude Medical

10:15 am **CMR Roadmap for Electrophysiology Procedures**
Reza Nezafat, PhD, Beth Israel Deaconess Medical Center

10:30 am **MR- EP Devices**
Steffen Weiss, MSc, Philips Technologie GmbH

11:00 am **MR Lesion Characterization - Can It Be Done in Real-time?**
Peter Nordbeck, MD, University of Wuerzburg

11:15 am **MR-Guided Atrial Ablations**
Eugene Kholmovski, PhD, University of Utah

11:15 am **Q and A**

11:30 am – 1:00 pm Sago Ballroom

Closing Plenary Session – Evidence-based Debate

Moderators: David Bluemke, MD, PhD, National Institutes of Health
Michael Jerosch-Herold, PhD, Brigham and Women's Hospital

Upon completion of this educational activity, the participant should be better able to:

- Describe the role for CMR in population based studies of cardiovascular disease
- Identify examples where CMR has played or will play a prominent role in population-based trials of cardiovascular disease
- Describe some of the main challenges for incorporating CMR in population-based trials

11:30 am **Use of CMR in Population Trials**
Pro: Steffen Petersen, MD, Barts and The London NHS Trust
Con: Thomas Marwick, MD, PhD, Cleveland Clinic

12:10 pm **Opinions from the Experts: Incorporation of CMR into Multi-center Clinical Trials IS Critical to the Field**
Matthias Friedrich, MD, Université of Montréal

12:30 pm **Limitations in Clinical Trial Design Can Adversely Affect CMR**
Andrew Arai, MD, NHLBI

12:50 pm **Q and A**

1:00 pm – 1:30 pm **Closing Remarks and Meeting Highlights**
Andrew Arai, MD, NHLBI

Friday, February 3, 2012

Crystal Ballroom A-B-C

10:15 am **Welcoming Remarks**
Ralph Gentry, ARRT, Beaumont Hospital

10:20 am – 12 Noon **CMR Essentials**
Ralph Gentry, ARRT, Beaumont Hospital

10:20 AM **Physics for CMR- Sequences and Parameters**
Jack Roy, AS, University of Virginia

Upon completion of this educational activity, the participant should be better able to:
- Understand the role of MRI hardware
- Understand the basic layout of a MRI sequence
- Know the meaning of basic MRI sequence terminology

10:55 am **CMR Safety**
Frank Shellock, PhD, University of Southern California

Upon completion of this educational activity, the participant should be better able to:
- Discuss MRI-related bio-effects and safety issues
- Describe problems related to acoustic noise
- Implement methods to control access to MRI environment
- Utilize comprehensive screening procedures
- Appreciate information relative to 3-Tesla
- Understand MRI labeling information

11:30 am **ECG Gating Strategies**
Mercedes Pereyra, MBA, BS, RT, Circle Cardiovascular Imaging

Upon completion of this educational activity, the participant should be better able to:
- Different approaches to troubleshoot ECG
- Modify the scanning protocol according to the patient's heart rate
- By examples of different methods the audience will be able to take these concepts and apply them in their environment

12 Noon - 1:00 pm **SCMR Business Meeting**

12:30 pm - 1:30 pm **Lunch (on own)**

1:30 pm - 3:00 pm **Vendor Breakout Session**
Moderator: Ralph Gentry, ARRT, Beaumont Hospital

1:30 pm **Troubleshooting/What's New with GE, Philips, Siemens & Toshiba**

2:30 pm **SCMR Ask the Experts**

3:00 pm - 3:30 pm **Refreshment Break**

3:30 pm - 5:50 pm **Basic CMR**
Moderator: Kraig Kissinger, BS, RT, Beth Israel Deaconess Medical Center

3:30 pm **Cardiac Anatomy with CMR**
Emer Sonnex, M.Phil, Alberta Health Services

Upon completion of this educational activity, the participant should be better able to:
- Recognize cardiovascular anatomy in three orthogonal planes
- Understand why we use the imaging planes that are routine in cardiac MRI
- Obtain the standard imaging planes with confidence

4:05 pm **Cardiac Function and Volumetric Assessment**
Gillian Smith, MSc, Royal Brompton Hospital

Upon completion of this educational activity, the participant should be better able to:
- Identify the common causes of change in ventricular volumes and function
- Describe why cardiac volumes are measured in the evaluation of cardiac functional assessment. Have a good working knowledge of available analysis
- Recognize the importance of reproducible data for accurate volumetric assessment and how to ensure the acquisition is of optimal technical quality.

4:40 pm **Diastolic Function and Strain Analysis**
John-Paul Carpenter, MD, Royal Brompton Hospital

Upon completion of this educational activity, the participant should be better able to:
- Acquire and analyze flow sequences for assessment of diastolic function
- Appreciate signs of diastolic impairment which suggest the need for further investigation
- Have an appreciation of advanced/research techniques for assessment of diastology

5:15 pm **Mechanical Dyssynchrony - Assessing Heart Failure and Improving Cardiac Resynchronization Therapy**
Jonathan Suever, Georgia Tech/Emory University

Upon completion of this educational activity, the participant should be better able to:
- Describe various CMR technologies used to measure mechanical dyssynchrony in the heart
- Summarize the importance of mechanical dyssynchrony in assessing cardiac function in heart failure patients
- Explain the benefits of utilizing mechanical dyssynchrony for cardiac resynchronization therapy planning

6:30 pm – 8:00 pm **Moderated Poster Session 1, Poster Session 1, Exhibits, and Wine and Cheese Reception** Royal/Sabal Ballrooms

Saturday, February 4, 2012 Crystal Ballroom A-B-C

7:45 am – 9:30 am **Aortic and Valve Disease**
Moderator: Jane Francis, DC R, DNM, The John Radcliffe Hospital

7:45 am **Imaging the Aorta**
Alison Fletcher, RT, Southampton General Hospital

Upon completion of this educational activity, the participant should be better able to:
- Understand the role of MRI in imaging the aorta
- Understand which sequences and imaging planes should be used and why
- Understand the limitations and pitfalls of imaging the aorta

8:20 am **Marfans Disease Assessed with CMR**
Alex Pitcher, MD, University of Oxford

Upon completion of this educational activity, the participant should be better able to:
- Understand the indications for CMR in patients with Marfan syndrome
- Know the CMR sequences which are often useful in patients with Marfan syndrome
- Recognize common CMR signs of Marfan syndrome

8:55 am **Valve Disease and Flow Measurement**
Yuchi Han, MD, MMSc, University of Pennsylvania

Upon completion of this educational activity, the participant should be better able to:
- Choose imaging planes for four valves
- Understand pitfalls in flow quantification
- CMR imaging of common valvular diseases

Abstract Presentations

8:55 am **T2 Cardiac Magnetic Resonance Characteristics of Pediatric Cardiac Teratoma**
Amy Tipton, BFA, Cincinnati Children's Medical Center

9:05 am **T4 Bolus Administration T1 Mapping as a Marker of Interstitial Myocardial Fibrosis in Severe Aortic Stenosis**
Rick Wage, DCR (R), Royal Brompton Hospital

9:30 am – 10:00 am **Refreshment Break** Royal/Sabal Ballrooms

10:00 am – 11:45 am **Congenital Heart Disease**
Moderator: Elizabeth Goddu, RT, Beth Israel Deaconess Medical Center

10:00 am **Congenital Heart Disease- The Role of CMR**
Justine Wilson, BS, RT (R), Children's Hospital of Philadelphia

Upon completion of this educational activity, the participant should be better able to:
- Image even the smallest of our pediatric patients and obtain the best images
- Evaluate what sequences are best for particular pathologies and how best to optimize them
- Look to the future of CMR and see where our technology is heading

10:25 am **Pediatric CMR - The Challenges**
David Annese, RT (R), Children's Hospital Boston

Upon completion of this educational activity, the participant should be better able to:
- Understand the technical challenges in imaging pediatric patients with congenital heart disease
- Understand some of the indications for cardiac MRI in pediatric patients
- Understand some basic imaging protocols in pediatric cardiac MRI

11:10 am **Anomalous Coronary Arteries Assessed with CMR**
Rajesh Krishnamurthy, MD, Texas Children's Hospital

Upon completion of this educational activity, the participant should be better able to:
- Understand the spectrum of coronary pathology in children
- Learn about common indications for coronary MR imaging in children, pros and cons of CT vs. MRI for coronary imaging, and common pitfalls of MR imaging
- Improve their skills in coronary MR imaging by understanding technique modifications necessary for children, and learning typical MR findings in pediatric coronary disease

11:45 am – 12:45 pm **Lunch (on own)**

12:45 pm – 2:00 pm **Abstract Presentations**
Moderator: Mary Watkins, RT, MR, C-TRAIN

12:45 pm **First Place Abstract: T1 Modified Short Axis Geometry for Left Ventricular Assessment in Patients with Hemodynamically Significant Pulmonary**
Amy Tipton, BFA, Cincinnati Children's Medical Center

12:55 pm **Second Place Abstract: T3 Retrospective Review of Patients with Atrial Fibrillation: Does Pulmonary Vein Isolation Make a Difference?**
Ronald Williams, BA, RT (R) (MR), Allegheny General Hospital

1:15 pm – 2:00 pm **CMR Quiz**

2:00 pm – 2:30 pm **Refreshment Break** Royal/Sabal Ballrooms

2:30 pm - 4:50 pm **Imaging the Patient with Chest Pain!**
Moderator: Alison Fletcher, RT, Southampton General Hospital

2:30 pm **Myocardial Viability**
Richard Coulden, MD, University of Alberta

Upon completion of this educational activity, the participant should be better able to:
- Understand the importance of assessing myocardial viability in patients being considered for revascularization
- Understand the role of CMR in assessing myocardial viability
- Understand how CMR fits in with other techniques that are widely used for assessing myocardial viability

3:05 pm **Adenosine Stress Perfusion**
Mark Westwood, MD, The London Chest Hospital

Upon completion of this educational activity, the participant should be better able to:
- Understand the indications for adenosine stress perfusion CMR
- Review how to perform adenosine stress perfusion in a safe manner
- Discuss potential imaging pitfalls and complications of adenosine stress perfusion CMR
- Review how to optimize workflow for adenosine stress perfusion CMR

3:40 pm **Dobutamine Stress CMR**
Stephen Harden, MD, Southampton General Hospital

Upon completion of this educational activity, the participant should be better able to:
- Understand why and when dobutamine stress CMR is performed
- Arrange a CMR protocol for a dobutamine CMR study
- Understand the imaging appearances in a positive and a negative study

4:15 pm **The Diagnosis of Acute Myocarditis using CMR**
Vanessa Ferreira, MD, University of Oxford

Upon completion of this educational activity, the participant should be better able to:
- Recognize the utility of CMR in the diagnosis of acute myocarditis
- List the CMR diagnostic criteria for myocarditis
- Understand the limitations of CMR in the diagnosis of myocarditis

5:30 pm – 6:00 pm **CMR Technology Updates** Sago Ballroom

6:00 pm – 6:30 pm **Presentation of Awards** Sago Ballroom

6:30 pm – 8:00 pm **Awards Reception** Crystal Ballroom H

Sunday, February 5, 2012 Crystal Ballroom A-B-C

7:45 am – 9:30 am **MRA Techniques**
Moderator: Petra Keilberg, RT, FGTM, IFC, Pisa MRI Laboratory

7:45 am **Basic CE-MRA Techniques**
Stephen Darty, BS, RT, Duke Cardiovascular Magnetic Resonance Center

Upon completion of this educational activity, the participant should be better able to:
- Understand proper utilization of gadolinium contrast agents in 3D CE MRA
- Understand timing of contrast administration and scan acquisition
- Understand underlying concepts of 3D angiography

8:20 am **Non-contrast MRA**
Debiao Li, PhD, Cedars Sinai Medical Center

Upon completion of this educational activity, the participant should be better able to:
- Obtain knowledge of current non-contrast MRA techniques and their clinical performance
- Optimize non-contrast MRA protocols
- Understand future development of non-contrast MRA

8:55 am **Blood Pool and Other New Contrast Agents**
J. Paul Finn, MD, University of California – Los Angeles

Upon completion of this educational activity, the participant should be better able to:
- Understand the physico-chemical properties of new and intra-vascular MR contrast agents of relevance to MR imaging
- Understand how MR imaging parameters and protocols are optimized with new vascular contrast agents
- Be familiar with the established and evolving clinical applications of vascular MR contrast agents

9:30 AM – 10:00 am **Refreshment Break**

10:00 AM – 11:45 am **Advanced CMR**
Moderator: Jack Roy, AS, University of Virginia

10:00 am **MR Safety Consideration for High and Ultrahigh Field CMR: Implications for Routine CMR**
Thoralf Niendorf, PhD, Max-Delbrueck-Center for Molecular Medicine

Upon completion of this educational activity, the participant should be better able to:
- Explain the clinical relevance of (ultra)high field CMR and recognize the technical and physical obstacles for (ultra)high field CMR
- Survey the pros and cons of (ultra)high field CMR and appreciate novel MR technology and imaging strategies driven by (ultra)high field MR
- Understand the extra added clinical value of (ultra)high field CVMR consider practical implications for routine (ultra)high field CMR

10:35 am **Cardiac Spectroscopy**
Robert Evers, BSRT, MR, CV, CT, National Institutes of Health

Upon completion of this educational activity, the participant should be better able to:
- Understand the purpose of Cardiac Spectroscopy in MRI
- Understand the multiple ways of completing this type of difficult imaging
- Recognize common artifacts associated with Cardiac Spectroscopy in MR

11:10 am **T1 and T2 Mapping Techniques**
Matthew Robson, PhD, University of Oxford

Upon completion of this educational activity, the participant should be better able to:
- Understand the difference between T1 and T2 weighting and T1 and T2 mapping
- Understand the methods of acquisition for relaxation time mapping techniques
- Appreciate the sources of error and artefact and how to avoid them when using relaxation mapping methods

11:45 am **Closing Remarks**
Ralph Gentry, ARRT, Beaumont Hospital

SCMR

FRIDAY, FEBRUARY 3, 2012

6:30 PM – 7:30 PM **Royal/Sabal Ballrooms**

POSTER SESSION I – Not accredited for CME

You are invited to meet the authors of the following posters on Friday evening during the Wine and Cheese Reception.

MODERATED POSTERS:
M1- M7

BASIC TRANSLATIONAL – NEW TECHNIQUES READY FOR CLINICAL APPLICATION:
P14, P35, P50, P58, P63, P68-P69, P135, P221, P235, P242, P267-P271, P273-P276, P283, P293, P307

BASIC TRANSLATIONAL – POST-PROCESSING:
P5, P16, P56, P65-P66, P236, P244-P246, P277-P279

BASIC TRANSLATIONAL – PRE-CLINICAL VALIDATION OF AN EXISTING TECHNIQUE: P47, P57, P60-P62, P64, P67, P106, P126, P194, P218-P220, P238-P241, P265, P281

CLINICAL OUTCOME AND PROGNOSIS:
P3, P6, P22, P46, P48, P53, P84, P86, P90, P123, P144, P147, P175, P201, P211, P223, P247, P294, P299

COST EFFECTIVENESS AND COMPARISON TO OTHER MODALITIES:
P40, P45, P76, P81, P97, P153-P155, P296-P297

HIGH THROUGHPUT AND EFFICIENT CLINICAL IMAGING:
P10, P39, P41-P44, P209, P231-P232, P256-P258 P284, P295, P298

NON-ISCHEMIC HEART DISEASE – PRIMARY AND SECONDARY CMP:
P71, P75, P141-P143, P145-P146, P148, P152, P156-P165, P167-P168, P173-P174, P176-P177, P181-P182, P185-P186, P193, P196-P197, P260, P291, P304

VASCULAR MRI:
P51, P72- P73, P77, P83, P91, P95, P127-P129, P131-P134, P136, P139, P228, P280, P292

TECHNOLOGIST POSTERS:
T1, T2, T3, T4, T5, T6, T8, T9, T10, T11, T12, T13, T14

SATURDAY, FEBRUARY 4, 2012

11:30 AM – 12:30 PM **Royal/Sabal Ballrooms**

POSTER SESSION II – Not accredited for CME

You are invited to meet the authors on Saturday from 11:30 AM – 12:30 PM.

MODERATED POSTERS:
M8-M14

CAD ISCHEMIA AND VIABILITY:
P2, P4, P8-P9, P11-P13, P15, P17, P19-P20, P24-P28, P30, P32-P34, P36-P38, P80, P100, P188, P198, P213, P226-P227, P243, P248-P253, P263-P264, P287, P300-P302

CAD OTHER:
P21, P29, P31, P49, P52, P78, P150, P212, P225, P230, P234, P254-P255, P266, P285

CONGENITAL HEART DISEASE:
P87, P102-P122, P124, P140, P166, P199, P289

EP AND INTERVENTIONAL APPLICATIONS:
P101, P149, P200, P202-P208, P214-P217

NONE (NO SPECIFIC CATEGORY):
P1, P7, P18, P23, P82, P130, P138, P171-P172, P184, P286, P290, P303, P306

NON-ISCHEMIC HEART DISEASE – OTHER:
P79, P85, P89, P92-P94, P96, P98-P99, P125, P137, P151, P169-P170, P178-P180, P183, P187, P189-P192, P195, P210, P224, P233, P259, P288, P305

PHYSIOLOGY AND METABOLISM INCLUDING SPECTROSCOPY:
P54, P55, P59, P70, P74, P88, P222, P229, P237, P261-P262, P282

TECHNOLOGIST POSTERS:
T1, T2, T3, T4, T5, T6, T8, T9, T10, T11, T12, T13, T14

Poster Directory

Basic Translational – New Techniques Ready for Clinical Application

M10	*Pang, Jianing*	Self-Guided Retrospective Motion Correction (SEGMO) for Free-Breathing Whole-heart Coronary MRA with 100% Acquisition Efficiency
M14	*Do, Loi*	Determination of The Volume of Coronary Microemboli Needed for Reproducible Visualization of Microinfarcts on Contrast Enhanced MDCT and MRI
P14	*Schuster, Andreas*	Cardiac Magnetic Resonance Myocardial Feature Tracking Detects Quantitative Wall Motion During Dobutamine Stress
P35	*Mekkaoui, Choukri*	Left Ventricular Remodeling Following Myocardial Infarction Revealed with a Quantitative Diffusion MRI Tractography Framework
P50	*Kim, Paul*	Manganese-Enhanced MRI in the Evaluation of Cell-Based Therapy for Myocardial Restoration
P58	*O h-Ici, Darach*	A method of studying the course of myocardial ischemia and reperfusion in rats in vivo
P63	*Fu, Yingli*	XFM-Guided Delivery of Imaging-Visible Human Mesenchymal Stem Cells into the Pericardial Space in a Porcine Model
P68	*Hammer, Sebastiaan*	Functional and Metabolic Imaging of The Right Ventricle: Short-Term Caloric Restriction Increases Myocardial Triglyceride Content and Decreases Diastolic Heart Function
P69	*Utz, Wolfgang*	Moderate Dietary Weight Loss Reduces Myocardial Triglycerides in Obese Women
P135	*Sosnovik, David*	Classification of Human Coronary Atherosclerotic Plaques with T1, T2 and Ultrashort TE MRI
P221	*Piechnik, Stefan*	Age and Gender Dependence of Pre-Contrast T1-Relaxation Times in Normal Human Myocardium at 1.5t Using ShMOLLI

P235	*Abd-Elmoniem, Khaled*	Assessment of Coronary Artery Disease Wall Thickening using Phase-Sensitive Black-Blood MRI: Initial Experience for the Evaluation of Coronary Artery Disease
P242	*Adluru, Ganesh*	Compression2: Compressed sensing with compressed coil arrays
P267	*Burger, Ian*	Elliptical Subject Specific Model for Respiratory Motion
P268	*Kuhara, Shigehide*	Effects of Quality of Dictionary in Knowledge-Based 6-Plane Automatic Slice-Alignment Method for Cardiac Magnetic Resonance Imaging
P269	*Nitta, Shuhei*	Improvement of Knowledge-Based Automatic Slice-Alignment Method for Cardiac Magnetic Resonance Imaging
P270	*Medrano-Gracia, Pau*	Detection and Correction of Regional Shape Bias Arising from Imaging Protocol: Differences between GRE and SSFP
P271	*Sayin, Ozan*	Through-slice Dephasing for Eddy Current Artifact Reduction in bSSFP
P273	*Wang, Jinnan*	Using mDixon to remove motion artifacts in carotid artery vessel wall MRI
P274	*Jenista, Elizabeth*	Phase Sensitive Inversion Recovery with Simultaneous Dark Fat Rendering by Virtual Chemical Inversion
P275	*Sharif, Behzad*	Projection Imaging of Myocardial Perfusion: Minimizing the Subendocardial Dark-Rim Artifact
P276	*Havla, Lukas*	Improved Fat Water Separation with Water Selective Inversion Pulse for Inversion Recovery-based Cardiac MRI Sequence
P283	*Broadbent, David*	Myocardial Microvascular Function at Rest and Stress Measured With Dynamic Contrast-Enhanced MRI
P293	*Feng, Yanqiu*	On Optimal Liver T2* Measurement: Region of Interest or Pixel-Wise?
P307	*Nam, Seunghoon*	Improved Accelerated Breath-hold Radial Cine Image Reconstruction by Acquiring Additional Free-Breathing Data between Breath-holds

Basic Translational – Post-Processing

P5	*Chiribiri, Amedeo*	Quantification of Transmural Perfusion Gradients by High-Resolution MR vs Fractional Flow Reserve for the Assessment of Coronary Artery Stenosis.
P16	*Zarinabad, Niloufar*	Effect of tracer arrival time on the estimation of the myocardial perfusion in DCE-CMR.
P56	*Positano, Vincenzo*	Segmental Analysis of Cardiac Metabolism by Hyperpolarized [1-13C] Pyruvate: An in-vivo 3D MRI Study in Pigs
P65	*Schneider, Jurgen*	Highly Accelerated Cardiac Functional MRI in Rodent Hearts Using Compressed Sensing and Parallel Imaging at 9.4T
P66	*Kung, Geoffrey*	Microstructural Remodeling in the Post-infarct Porcine Heart Measured by Diffusion Tensor MRI and T1-Weighted Late Gadolinium Enhancement MRI
P236	*Roy, Christopher*	Dynamic MRI of the Fetal Myocardium
P244	*Augustine, Daniel*	CMR Right Ventricular Strain Assessment Using Feature Tracking Cine Images: Agreement With Echocardiography.
P245	*Shaw, Jaime*	Improved Navigator-gated Motion Compensation in Cardiac MR Using Additional Constraint of Magnitude of Motion-Corrupted Data
P246	*Moghari, Mehdi*	Improved Data Acquisition Efficiency for Respiratory Motion Correction in Coronary MRI
P277	*Miller, Christopher*	Comparison of Local Sine Wave Modelling with Harmonic Phase Analysis for the Assessment of Circumferential Myocardial Strain from Tagged Cardiovascular Magnetic Resonance Images
P278	*Chung, Sohae*	Correction for Non-Uniform K-Space Data Weighting Effects in First-Pass Cardiac Perfusion Imaging with TurboFLASH Readout
P279	*Seiberlich, Nicole*	Through-Time 3D Radial GRAPPA for Whole Heart Cardiac Imaging

Basic Translational – Pre-clinical Validation of an Existing Technique

M11	*Lingala, Sajan Goud*	Motion Compensated Reconstruction for Myocardial Perfusion MRI
M8	*Goette, Matthew*	In Vivo Quantitative Imaging of Angiogenesis-targeted PFOB Nanoparticles in a Hypercholesterol Rabbit Model using 19F-MRI with Ultra-Short Echo Time Balanced SSFP
M9	*Kitagawa, Toshiro*	RGD Targeting of Human Ferritin Iron-Oxide Nanoparticles Enhances In Vivo Molecular MRI of Experimental Aortic Aneurysms
P47	*Sarnari, Roberto*	CMR Myocardial Infarct Evaluation in a Canine Model by Three Different Contrast Agents
P57	*Schneider, Jurgen*	Accurate Infarct-Size Measurements from Accelerated, Compressed Sensing Reconstructed Cine-MRI Images in Mouse Hearts
P60	*Belin, Alexandre*	Cine Interleaved Sequences Enabled Imaging of Mice on Clinical 3T MRI and Analysis of Their Cardiac Function After Myocardial Infarction
P61	*Jogiya, Roy*	First Pass Vasodilator-Stress Myocardial Perfusion CMR in Mice on a Whole-Body 3Tesla Scanner: Validation Against Microspheres
P62	*Dash, Rajesh*	Manganese-Enhanced MRI Detects Live Human Amnion-derived Mesenchymal Stem Cells In Vivo After Transplantation and Restoration of Myocardial Function in a Pig Ischemia-Reperfusion Injury Model.

P64	*Schuster, Andreas*	Cardiac Magnetic Resonance Imaging of Isolated Perfused Pig Hearts in a 3T Clinical MR Scanner
P67	*Dash, Rajesh*	In Vivo Detection and Treatment of Ischemia-Induced Cardiac Apoptosis Using an MRI-Detectable Molecular Probe and an Alpha-Adrenergic Receptor Agonist
P106	*Nett, Elizabeth*	Noninvasive pressure measurement with 4D Phase Contrast MRI in Patients with Aortic Coarctations
P126	*Liu, Chia-Ying*	Aortic Size, Distensibility, and Pulse Wave Velocity Changes with Aging: Longitudinal Analysis from Multi-Ethnic Study Of Atherosclerosis (MESA)
P194	*Ibrahim, El-Sayed*	Assessment of Iron Deposition in the Heart in Sickle Cell Patients Using 3.0 Tesla Cardiovascular Magnetic Resonance
P218	*Otton, James*	Direct comparison of MR and CT perfusion utilizing a myocardial perfusion phantom
P219	*Khodarahmi, Iman*	Accuracy of Flow Measurement with Phase Contrast MRI in a Stenotic Phantom: Where Should Flow be Measured?
P220	*Ye, Qing*	The Impact of Physiological Loading on Immune Cell Infiltration and Myocardial Function Evaluated by Cardiac MRI: A Comparison between Non-working Heart and Working Heart Transplant Models
P238	*Nielles-Vallespin, Sonia*	Diffusion Tensor MRI of the Human Heart *In Vivo* with a Navigator Based Free Breathing Approach
P239	*Lingala, Sajan Goud*	Accelerated imaging of rest and stress myocardial perfusion MRI using multi-coil k-t SLR: A feasibility study
P240	*Reyhan, Meral*	Quantitative assessment of systolic and diastolic left ventricular twist using Fourier Analysis of STimulated echoes (FAST) and CSPAMM
P241	*Liu, Junmin*	Simultaneous Measurement of Blood-Flow Velocity and Regional Wall Motion with Phase Unwrapping
P265	*Liu, Chia-Ying*	Myocardial T1 measurement: comparison of modified Look-Locker inversion recovery (MOLLI) and TI scout in the Multi-ethnic Study of Atherosclerosis (MESA)
P281	*Chow, Kelvin*	T2-Dependent Errors in MOLLI T1 Values: Simulations, Phantoms, and In-Vivo Studies

CAD Ischemia and Viability

M5	*Rathod, Krishnaraj*	Does Change in Heart Rate and Blood Pressure During Adenosine Stress Perfusion Cardiovascular Magnetic Resonance (A-CMRP) Imaging Predict Perfusion Defects?
M12	*Neizel, Mirja*	A Fully Automatic Cardiac Model with Integrated Scar Tissue Information for Improved Assessment of Viability
P2	*Haraldsson, Henrik*	Segmental Variation of Myocardial Deformation in Patients with Suspected Ischemic Heart Disease
P4	*Harker, Jodi*	Assessment of Significant Coronary Artery Stenosis Using Blood Oxygen Level Dependent Cardiovascular Magnetic Resonance (BOLD-CMR).
P8	*Morton, Geraint*	The Diagnostic Accuracy Of Quantitative CMR Perfusion Imaging May Not Be The Same For All Coronary Arteries.
P9	*Wong, Timothy*	Cardiovascular Magnetic Resonance Stress Perfusion Imaging Predicts 1 Year Outcomes Following Equivocal Stress Testing.
P11	*Woodard, Pamela*	Feasibility of Detecting Myocardial Ischemia Using First-Pass Contrast MRI and Regadenoson
P12	*Morton, Geraint*	Advanced Techniques Improve The Performance Of Myocardial Perfusion Imaging
P13	*Salerno, Michael*	Adenosine Stress CMR with Spiral Pulse Sequences Accurately Detect CAD
P15	*Andre, Florian*	Feasibility of High Dose Dobutamine Stress and Scar Imaging in High Field Open MRI in Patients with Suspected Coronary Artery Disease
P17	*Motwani, Manish*	Systolic Versus Diastolic Myocardial Blood Flow in Patients with Suspected Coronary Artery Disease – A Cardiovascular Magnetic Resonance Study
P19	*Ghugre, Nilesh*	Intramyocardial Hemorrhage Contributes to Microvascular Obstruction in Acute Myocardial Infarction
P20	*Ghugre, Nilesh*	Role of Iron Chelation in Hemorrhagic Myocardial Infarction: A Quantitative CMR Study
P24	*Langhans, Birgit*	Gender Differences in Contrast-Enhanced Magnetic Resonance Imaging After Acute Myocardial Infarction
P25	*Weissman, Gaby*	CMR in Acute Myocardial Infarction: Correlation Between Myocardial Scar and Echocardiographic strain.
P26	*Bourque, Jamieson*	T2-Imaging of the Ischemic Area-at-Risk Predicts Recovery of Cardiac Function After Acute ST-Elevation Myocardial Infarction
P27	*Chan, Winnie*	SSFP Cine Images Early Post-Gadolinium Improve Detection of Myocardial Oedema in Acute Myocardial Infarction Compared to T2-Weighted Dark Blood Turbo Spin Echo Images
P28	*Dall'Armellina, Erica*	Characterization of Acute Myocardial Infarction by Pre-Contrast T1 Mapping
P30	*Goldfarb, James*	Hemorrhagic Myocardial Infarction: Detection using Susceptibility Weighted Phase Imaging
P32	*Burchell, Thomas*	The Natural Time Course of Myocardial Oedema in the 12 Months Post ST-Elevation MI in Patients Treated with Primary Angioplasty.
P33	*Bönner, Florian*	Multimodal MRI in the Course of Cardiac Wound Healing after Myocardial Infarction
P34	*Tanimoto, Takashi*	Assessment of Myocardial Viability in Low Signal Intensity Areas on Cine MRI Comparison with Late Gadolinium Enhancement Imaging in Patients with Prior Myocardial Infarction

P36	*Wilson, Sean*	Papillary Muscle Infarction in Relation to Left Ventricular Infarct Distribution and Transmurality - Assessment by Delayed Enhancement Cardiac Magnetic Resonance Imaging
P37	*Jablonowski, Robert*	Infarct Quantification Using 3D Inversion Recovery and 2D Phase Sensitive Inversion Recovery, Validation in Patients and Ex Vivo.
P38	*McAlindon, Elisa*	CMR Endpoints for Clinical Trials: Impact of Operator Experience on The Accuracy of Image Analysis
P80	*Carballo, David*	Value of a Hybrid PET/MRI in the Assessment of Cardiac Viability
P100	*Goyal, Parag*	Mitral Apparatus Assessment by Delayed Enhancement CMR – Relative Impact of Papillary Muscle and Left Ventricular Wall Infarction on Ischemic Mitral Regurgitation
P188	*Monti, Lorenzo*	Short Inversion Time on Delayed-Enhancement Magnetic Resonance Improves Diagnostic Accuracy in Recent-Onset Heart Failure.
P198	*Andre, Florian*	Detection and Prevalence of Myocardial Infarction Early and Late After Heart Transplantation Detected by Late Gadolinium Enhanced MRI
P213	*Cheema, Omar*	Patterns of Myocardial Fibrosis by CMR in Patients with Conduction Abnormalities.
P226	*Asrress, Kaleab*	Increased Endocardial to Epicardial Flow Ratio Present at Rest Disappears During Exercise Stress Perfusion CMR in Normal Volunteers – A Potential Mechanism for Exercise Induced Subendocardial Ischaemia
P227	*Witschey, Walter*	Real Time Measurement of Cardiac Pressure-Volume Relationships
P243	*Kihlberg, Johan*	Myocardial Deformation (Strain) Measured by DENSE Reliably Detects Myocardial Scar.
P248	*Goldfarb, James*	Three-Compartment (3C) Pharmacokinetic Modeling is More Accurate than Two-Compartment (2C) Modeling of Myocardial Fibrosis Gadolinium Kinetics
P249	*Kino, Aya*	Evaluation of Fully Automated Motion Corrected First Pass Myocardial Perfusion MRI with Semi Quantitative Perfusion Parameter Maps in Patients with Ischemic Heart Disease
P250	*Shin, Taehoon*	Time-Resolved Early-to-Late Gadolinium Enhancement MRI Using Single Breath-Hold 3D Spiral Imaging
P251	*Giri, Shivraman*	Steady-State First-Pass Perfusion (SSFPP): A 3D TWIST in Myocardial First-Pass Perfusion Imaging
P252	*Berger, Alexander*	High-Dose Dobutamine Stress SSFP Cine MRI at 3 Tesla with Patient Adaptive Local RF Shimming Using Dual-Source RF Transmission
P253	*Kino, Aya*	Evaluation of Semi Quantitative Perfusion Parameter Maps Generated Based on a Fully Automated Non-Rigid Motion Correction During a First Pass Myocardial Perfusion (FPMP) MRI
P263	*Chen, Zhong*	Infarct Myocardium Tissue Heterogeneity Assessment Using Pre-Contrast and Post-Contrast T1 Maps Acquired with Modified Look-Locker Inversion Recovery (MOLLI) Imaging
P264	*Keegan, Jennifer*	Dynamic TI for late gadolinium enhancement imaging in atrial fibrillation
P287	*Vernikouskaya, Ina*	T2 Relaxation Time Mapping in Phantom and In Vivo Myocardial Studies to Investigate Optimal Method of Quantification
P300	*Bernhardt, Peter*	Blood Oxygen Level Dependent and Adenosine-Perfusion Imaging Correlates to Invasive Measurement of Fractional Flow Reserve
P301	*Kosiek, Ortrud*	Delayed Contrast-Enhanced Cardiac MRI at an Open 1.0T MR-system Comparison of Conventional Segmented 3D Gradient Echo and Phase-Sensitive Inversion Recovery Sequences - Initial Results
P302	*Amano, Yasuo*	Simultaneous Assessment of Myocardial Scar and Coronary Artery Disease by Navigator-Gated 3D Fat-Suppressed Delayed-Enhancement CMR: Comparison with 2D Selayed-Enhancement CMR, CT and CAG

CAD Other

P21	*Tödt, Tim*	Relationship Between the Duration of Ischemia and Final Infarct Size in STEMI Patients Treated with Abciximab and Primary PCI
P29	*Zia, Mohammad*	Diabetes is Associated with Increased and Persistent Myocardial Edema in Infarct Segment Post Acute Myocardial Infarction
P31	*McAlindon, Elisa*	Early Gadolinium Enhancement for the Detection of Myocardial Oedema (EGE vs T2-STIR vs ACUT2E): A New Method to Assess the Area at Risk?
P49	*Biris, Octavia*	A Steady-State Method for Computation of Myocardial Blood Volume with the Intravascular Contrast Agent Ablavar
P52	*Spatz, Deneen*	Time Course of the Effect of Ferumoxytol on T1-Relaxation Times of Blood, Liver, Myocardium, and Acute Infarction.
P78	*Kim, Hee Yeong*	Epicardial Adipose Tissue Thickness Assessed by Cardiac Magnetic Resonance is an Independent Indicator for Coronary Artery Stenosis in Asymptomatic Type 2 Diabetic Patients
P150	*Rao, Balaji*	The Role of Stress Cardiac MRI Imaging in Patients with Complete Left Bundle Branch Block
P212	*Migrino, Raymond*	Quantification of LVEF≤35% Misclassification by 2D-Echocardiography as Compared to Cardiac Magnetic Resonance in Coronary Artery Disease: Implications for AICD Therapy
P225	*Puntmann, Valentina*	Application of High Resolution T1 Mapping with MOLLI (hrMOLLI) to Differentiate Patients with Diffuse and Regional Myocardial Disease from Healthy Subjects

P230	*Asrress, Kaleab*	The Use of Feature Tracking to Assess Ventricular Strain During Exercise Stress CMR
P234	*Lamb, Hildo*	7T Clinical Cardiovascular MR imaging: Initial Experience
P254	*Xue, Hui*	Improved Real-time Exercise Stress Cardiac Cine Imaging using Self Consistent Parallel Imaging with Temporal Sensitivity Estimation (TSPIRIT)
P255	*Hussain, Tarique*	Coronary Magnetic Resonance Angiography: In vivo comparison of image quality at 1.5 Tesla versus 3.0 Tesla with Parallel Radiofrequency Transmission
P266	*McAlindon, Elisa*	T2 mapping vs T2 weighted imaging in the detection of myocardial oedema.
P285	*Fischer, Kady*	Non-Invasive Monitoring of Blood Gas-Induced Changes of Myocardial Oxygenation Using Oxygen-Sensitive CMR Clinical Outcome and Prognosis
P3	*Kwon, Deborah*	Right Ventricular Volumes vs. Right Ventricular Ejection Fraction are More Powerful Independent Predictors of Survival in Patients with Severe Ischemic Cardiomyopathy
P6	*Biederman, Robert*	Decisions Informed by Computing Entities (DICE) to Improve Prognostic Value of Myocardial Perfusion Imaging: The NHLBI-Sponsored Women's Ischemia Syndrome Evaluation (WISE) Study
P22	*Fuisz, Anthon*	Operator Volumes and Salvage Index in AMI
P46	*Nacif, Marcelo*	Gadolinium-Enhanced Cardiac Magnetic Resonance Imaging: Administered Dose in Relationship to United States Food and Drug Administration (FDA) Guidelines
P48	*Crowley, Anna Lisa*	The Incidence of Nephrogenic Systemic Fibrosis in Subjects Receiving Gadoversetamide for Cardiovascular Magnetic Resonance
P53	*Monti, Lorenzo*	India Ink Artifact on ECG-Gated SSFP Sequences Predicts Resectability of Tumours Invading the Mediastinum
P84	*Forouzandeh, Farshad*	Utility of CMR in Identification of Post Lung Transplant Cardiovascular Complications
P86	*Biederman, Robert*	Late Gadolinium Enhancement in Pulmonary Hypertension Predicts Clinical Events
P90	*Bull, Sacha*	Circumferential Strain Predicts Major Adverse Cardiac Events Independent of Myocardial Perfusion in Asymptomatic Aortic Stenosis
P123	*Romeih, Soha*	Effect of Age on Exercise Capacity and Cardiac Reserve in Patients with Pulmonary Atresia with Intact Ventricular Septum After Biventricular Repair.
P144	*Abbasi, Siddique*	Impact of a New Cardiac Magnetic Resonance (CMR) Program on Management and Clinical Decision-Making in Cardiomyopathy Patients
P147	*Biederman, Robert*	Can Cardiac MRI be the Index Metric for Risk Stratification in Dilated Cardiomyopathy; The Impact of an LV Mid-Myocardial Stripe on Subsequent Risk of LVAD, Transplantation and Death
P175	*Morgan, Roisin*	CMR Findings in Asymptomatic Male HIV Patients Compared to Healthy Male Controls
P201	*Walker, Jerry*	Left Atrial Volume Measurements Before and After Left Atrial Ablation for the Treatment of Atrial Fibrillation
P211	*Sommers, Dan*	Does Acute Pulmonary Vein Stenosis Secondary to Edema on Immediate Post Ablation Procedure CMR Increase Risk for Development of Chronic Pulmonary Vein Stenosis.
P223	*Andre, Florian*	Reference Values for the Left Ventricular Wall Thickness in Cardiac MRI in a Modified AHA 17-Segment Model
P247	*Lutz, Anja*	Volumetric Motion Quantification by 3D Velocity Encoded MRI
P294	*Moguillansky, Diego*	Myocardial Fibrosis Quantified by the Extracellular Extravascular Volume Fraction is Associated with the Left Ventricular Sphericity Index and the Left Atrial Volume Index
P299	*Naik, Srinivas*	Tricuspid Annular Plane Systolic Excursion (TAPSE) Revisited Using CMR

Congenital Heart Disease

M4	*Merritt, Bryce*	Association Between Leaflet Fusion Pattern and Thoracic Aorta Morphology in Patients with Bicuspid Aortic Valve
P87	*Stephensen, Sigurdur*	Quantification of the Contribution of Septal Movement to Stroke Volume in Healthy Subjects, Athletes, Patients with Pulmonary Insufficiency and Patients with Pulmonary Hypertension.
P102	*Massoud, Ikram*	Restrictive Right Ventricular performance assessed by Cardiac Magnetic Resonance after Balloon Valvoplasty of Severe Pulmonary Stenosis in Adolescents
P103	*Rutz, Tobias*	Right Pulmonary to Left Pulmonary Perfusion Ratio After Percutaneous Pulmonary Valve Implantation
P104	*Prakash, Ashwin*	Inter-Study Variability in CMR Measurements of Right Ventricular Volume, Mass and Ejection Fraction in Tetralogy of Fallot: A Prospective Observational Study
P105	*Rathod, Rahul*	Range of Ventricular Dimensions and Function by Steady-State Free Precession Cine Cardiac Magnetic Resonance in Patients Late after the Fontan Operation
P107	*Marroquin, Luis*	Cardiovascular Magnetic Resonance Imaging findings in Ebstein anomaly
P108	*Lu, Jimmy*	Optimization of Left Ventricular Ejection Fraction Measurement by Two-dimensional Echocardiography in Patients with Repaired Tetralogy of Fallot: Comparison of Geometric Methods with Cardiovascular Magnetic Resonance

P109	*Gulati, Gurpreet*	Cardiac Magnetic Resonance (CMR) and Three Dimensional Echocardiography (3DE) in Complete Evaluation of Ebstein Anomaly
P110	*Garg, Ruchira*	Comparison of Systolic and Diastolic 3D SSFP for Arterial Dimensions and Coronary Artery Origins in Patients with Congenital Heart Disease.
P111	*Romeih, Soha*	Is Cardiac CT a Reliable Alternative For Cardiac CMR in Adult Patients with a Systemic Right Ventricle?
P112	*Keedy, Alexander*	MR Evaluation of Tetralogy of Fallot Patients after Surgical Repair: Relationship Between Aortic Dilation and Aortic Regurgitation
P113	*Voges, Inga*	Assessment of Intraatrial Lateral Tunnel Anatomy and Venous Blood Flow in Children with Hypoplastic Left Heart Syndrome in Fontan Circulation
P114	*Restrepo, Maria*	Growth of the Inferior Cavopulmonary Pathway in Patients with a Lateral Tunnel Fontan Connection: Quantification from Serial Magnetic Resonance Images
P115	*Taylor, Andrew*	Mechanical and Morphological Properties of the Aortic Root and Arch Late After Arterial Switch Operation for Transposition of the Great Arteries
P116	*Chen, Sylvia*	The Relation Between Significant Stenosis or Dilatation at the Repair Site and Outcome in a Contemporary Cohort of Patients with Repaired Aortic Coarctation as Assessed Using Cardiovascular Magnetic Resonance
P117	*Taylor, Andrew*	Non-Invasive Single Slice Estimate of Aortic Distensibility from Phase-Contrast MRI: Application to Hypoplastic Left Heart Syndrome
P118	*Kozak, Marcelo*	Quantification of Ductal Blood Flow with Magnetic Resonance Imaging in Newborns with Obstructive Left Heart Disease
P119	*Nguyen, Kim-Lien*	CMR in Pediatric Patients with Congenital Heart Disease: Comparison at 1.5T and at 3.0T
P120	*Galizia, Mauricio*	Steady-State Magnetic Resonance Angiography of the Thoracic Vasculature in Congenital Heart Disease using a Blood Pool Contrast Agent: Evaluation of Two Different Techniques
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Bremerich, Jens: Financial Disclosure: Nothing to disclose
Broberg, Craig: Financial Disclosure: Nothing to disclose
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Carpenter, John-Paul: Financial Disclosure: Honoraria: Novartis and ApoPharma
Carr, James: Financial Disclosure: Grant/Research Support: Astellas, Siemens; Speaker's Bureau: Lantheus
Caruthers, Shelton: Financial Disclosure: Grant/Research Support: Kereos; Stock Shareholder: Philips
Chen, Marcus: Financial Disclosure: Nothing to disclose
Christian, Timothy: Financial Disclosure: Nothing to disclose
Coulden, Richard: Financial Disclosure: Nothing to disclose
Cury, Ricardo: Financial Disclosure: Grant/Research Support: GE Healthcare; Astellas Pharma
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Dyverfeldt, Petter: Financial Disclosure: Nothing to disclose
Edelman, Robert: Financial Disclosure: Grant/Research Support:Siemens Healthcare; Honoraria: Siemens, Bayer
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Festa, Pierluigi: Financial Disclosure: Nothing to disclose
Finn, J. Paul: Financial Disclosure: Grant/Research Support: Siemens Medical Solutions, Bracco Diagnostics: Speaker's Bureau: Lantheus
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Fratz, Sohrab: Financial Disclosure: Nothing to disclose
French, Brent: Financial Disclosure: Nothing to disclose
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Geva, Tal: Financial Disclosure: Nothing to disclose
Greil, Gerald: Financial Disclosure: Nothing to disclose
Grosse-Wortmann, Lars: Financial Disclosure: Nothing to disclose
Hamilton, James: Financial Disclosure: Stock Shareholder: VascuVis
Hansen, Michael: Financial Disclosure: Nothing to disclose
Helbing, Willem: Financial Disclosure: Nothing to disclose
Hope, Michael: Financial Disclosure: Nothing to disclose
Hulten, Edward: Financial Disclosure: Nothing to disclose
Jensen, Christoph: Financial Disclosure: Nothing to disclose
Jerosch-Herold, Michael: Financial Disclosure: Other: Named as inventor on pending IP protection application pertaining to diffuse fibrosis detection
Johnson, Tiffanie: Financial Disclosure: Nothing to disclose
Jucker, Beat: Financial Disclosure: Employee: GlaxoSmithKline
Kholmovski, Eugene: Financial Disclosure: Nothing to disclose
Kilner, Philip: Financial Disclosure: Nothing to disclose
Kim, Raymond: Financial Disclosure: Inventor on a US patent on Delayed-enhancement MRI
Kozerke, Sebastian: Financial Disclosure: Nothing to disclose

Kraitchman, Dara: Financial Disclosure: Grant Research Support: Siemens Medical Solutions, Boston Scientific; Consultant: Surefire Medical, Inc.

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Krishnamurthy, Rajesh: Financial Disclosure: Grant/Research Support: Eisai Pharmaceuticals, Philips

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Lederman, Robert: Financial Disclosure: Nothing to disclose

Li, Debiao: Financial Disclosure: Nothing to disclose

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Malloy, Craig: Financial Disclosure: Nothing to disclose

Manning, Warren: Financial Disclosure: Grant/Resarch Support: Philips Medical Systems

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Marrouche, Nassir: Financial Disclosure: Grant/Research Support:Biosense Webster, Sanofi-Aventis MRI Interventions, Biotronik, e-cardio; Honoraria: Boehringer Ingelheim, Biotronik Medtronic; Consultant: Sanofi-Aventis, MRI Interventions, e-Cardio

Martin, Edward: Financial Disclosure: Grant/Research Support: Siemens; Consultant: Siemens; Speaker's Bureau: Lantheus; Honoraria: Lantheus

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Nazarian, Saman: Financial Disclosure: Nothing to disclose

Neubauer, Stefan: Financial Disclosure: Nothing to disclose

Niendorf, Thoralf: Financial Disclosure: Other: MRI.TOOLS GmbH, Berlin, Germany (founder)

Pennell, Dudley: Financial Disclosure: Grant/Research Support: Siemens; Consultant: Siemens, Apotex, Novartis; Honoraria: Siemens, Honoraria:Apotex, Novartis

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Ruberg, Frederick: Financial Disclosure: Nothing to disclose

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Wright, Graham: Financial Disclosure: Grant/Research Support: GE Healthcare; Other: Licensing/Royalties - Circle Cardiovascular

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Fletcher, Alison: Financial Disclosure: Nothing to disclose
Finn, J. Paul: Financial Disclosure: Grant/Research Support: Siemens Medical Solutions, Bracco Diagnostics: Speaker's Bureau: Lantheus
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Gentry, Ralph: Financial Disclosure: Nothing to disclose
Goddu, Elizabeth: Financial Disclosure: Nothing to disclose
Han, Yuchi: Financial Disclosure: Nothing to disclose
Harden, Stephen: Financial Disclosure: Nothing to disclose
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Krishnamurthy, Rajesh: Financial Disclosure: Grant/Research Support: Eisai Pharmaceuticals, Philips
Li, Debiao: Financial Disclosure: Nothing to disclose
Niendorf, Thoralf: Financial Disclosure: Other: MRI Tools (founder)
Pereyra, Mercedes: Financial Disclosure: Employee: Circle Cardiovascular Imaging
Robson, Matthew: Financial Disclosure: Other: Patent: shMOLLI method
Roy, Jack: Financial Disclosure: Nothing to disclose
Shellock, Frank: Financial Discosure: Financial Disclosure: Boston Scientific, Bracco, Cook Medical, GE, In Vivo, Johnson & Johnson, Magmedix, Medtronic, Metrasens, St. Jude Medical
Smith, Gillian: Financial Disclosure: Consultant: Novarti; Honoraria: Apo Pharma
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Suever, Jonathan: Financial Disclosure: Nothing to disclose
Watkins, Mary: Financial Disclosure: Nothing to disclose
Westwood, Mark: Financial Disclosure: Nothing to disclose
Wilson, Justine: Financial Disclosure: Nothing to disclose

GE Healthcare

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Sponsored by GE Healthcare MRI

Friday, February 3rd, 2012 at 12:30

Sawgrass Room at Marriott World Center Orlando

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Agenda

12:30 Lunch provided

12:45 Power. Simplicity. Discovery MR750w 3.0T and Optima MR450w 1.5T with GEM Suite for CMR.

Maggie Fung
MR Cardiovascular Applications Development Manager
GE Healthcare, Milwaukee, WI, USA

12:55 Assessment of Mitral Regurgitation Using a Semi-Automated Algorithm

Steven D. Wolff, MD, PhD
Assistant Professor of Radiology at Columbia University Medical Center

1:10 Quantitative Tissue Characterization - Where Will MR Take Us?

Graham Wright, PhD
Professor, Department of Medical Biophysics, University of Toronto/
Senior Scientist, Sunnybrook Health Sciences Centre

This educational symposium is not part of the SCMR CME Program.

We are looking forward to seeing you!

Visit us in the booth **# 34** in the SCMR Exhibit Hall

imagination at work

Cardiom — Booth 1

1876 Firman Drive
Richardson, TX 75081
Tel: 972-437-0430
Fax: 972-437-2098
Web: www.cardiom.com

Cardiom delivers the most accurate clinical answers from CMRI. Our flagship product, Compass™, quantifies disease states and contextualizes patient data with control data. Compass' assessments of ventricular function are aggregated from 1,296 quantitative micro assessments around the ventricle wall.

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Cardiovascular Imaging Solutions Ltd. — Booth 5

Incubator, Bessemer Building
Imperial College
Exhibition Road
London SW7 2AZ
United Kingdom
Tel: +44 (0)7885 906770
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Email: sales@cmrtools.com
Web: www.cmrtools.com

CMRtools is a software package for viewing and analysing cardiovascular magnetic resonance images. In its simplest form, CMRtools can be used as a standalone DICOM image viewer, providing rapid, versatile image browsing and region-of-interest analysis. When used in conjunction with the different plug-in packages of CMRtools, it provides advanced cardiac quantification and modelling capabilities.

CIRCLE Cardiovascular Imaging — Booth 20

12, 3535 Research Rd NW
Calgary, Alberta T2L 2K8
Canada
Tel: 403-338-1870
Fax: 403-338-1895
Email: info@circlecvi.com
Web: www.circlecvi.com

Circle Cardiovascular Imaging Inc. is a Calgary based company that develops analytical software for cardiac imaging.

cmr42 and cvi42 are independent cardiovascular post–processing software comprising state–of–the–art modules for viewing and analyzing of CMR and CT images. report42 completes the product line and facilitates fast and easy transition from quantitative information to a structured report.

Circle is striving to provide innovative products that make a difference in lives.

Diagnasoft, Inc. — Booth 28

2501 Aerial Center Parkway, Suite 202
Morrisville, NC 27560
Tel: 919-677-8100
Fax: 919-883-1815
Web: www.diagnasoft.com

Diagnosoft develops advanced, enterprise-capable cardiac MRI quantification software that delivers unmatched detail and analysis of regional heart function, empowering early detection, accurate diagnosis and more effective treatment of heart disease and abnormality. HARP and SENC both patented technologies have helped transforming the industry by expanding the scope and sensitivity of CMRI quantification and analysis. Diagnosoft PULSE, NEW!, is healthcare first vendor independent CMRI structured reporting software.

GE Healthcare — Booth 34

3000 Grandview Blvd.
Hwy I-94 & HWY T West Lobby
Waukesha, WI 53188
Tel: 414–721–2461
Web: www.gehealthcare.com

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people through innovations focused on reducing costs, increasing access and improving quality around the world.

Heart Imaging Technologies — Booth 8

5003 Southpark Drive, Suite 140
Durham, NC 27713-9414
Tel: 919-323-3001
Fax: 866-457-3694
Web: www.heartit.com

Heart IT® is a global leader in the medical imaging industry. Their flagship product, WebPAX® was the first FDA approved zero-footprint medical imaging workstation. It allows physicians to view, report and search diagnostic-quality CMR images on any browser including mobile devices. WebPAX® has received 5 patents for its unique technology. Used by approximately 5,000 physicians at 250 medical centers, customers include leading academic institutions such as Johns Hopkins, Duke, Cornell and Ohio State.

Intersocietal Accreditation Commission (IAC) — Booth 7

6021 University Blvd., Ste. 500
Ellicott City, MD 21045
Tel: 800-838-2110
Fax: 800-581-7889
Email: accreditation@intersocietal.org
Web: www.intersocietal.org

The IAC provides a voluntary accreditation process for providers of MR, enabling applicant facilities to evaluate and demonstrate the level of patient care they provide.

The Standards, outlining the recommendations and requirements for a quality MR facility, will be displayed along with details of the new Online Accreditation application format.

You may visit www.intersocietal.org or call 800-838-2110 for more information. Stop by the IAC booth to learn more about payment policies linking reimbursement to accreditation.

Journal of Cardiovascular Magnetic Resonance (JCMR) — Booth 2

Cardiovascular MR Unit
Royal Brompton Hospital
Sydney Street
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United Kingdom
Tel: +44 207 351 8825
Fax: +44 207 351 8816
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Web: www.jcmr-online.com

JCMR, the official journal of the Society for Cardiovascular MR, is an open access, online journal that publishes articles on all aspects of basic and clinical research on the design, development, manufacture, and evaluation of magnetic resonance methods applied to the cardiovascular system. The only journal devoted exclusively to cardiovascular MR, JCMR aims to provide an international forum for communicating the latest findings and reviews on the burgeoning field of cardiovascular MR imaging and spectroscopy.

Lippincott Williams Wilkins — Booth 4

3013 E. South Fork Drive
Phoenix, AZ 85048
Tel: 480-704-1995
Fax: 480-704-1995
Email: craig.roberts@wolterskluwer.com

Lippincott Williams & Wilkins has some of the best books in cardiovascular imaging.

Medis Medical Imaging Systems — Booth 38

9360 Falls of Neuse Road, Suite 103
Raleigh, NC 27615
Tel: 919-278-7890
Fax: 919-847-8817
Web: www.medis.nl

Medis is a leading provider of software solutions for accurate quantification of cardiovascular MR images. At SCMR 2012, Medis will demonstrate its latest version of its flagship product QMass® Enterprise Solution, which includes a versatile cardiac MR viewer, an integrated connectivity platform and proven best in-class quantitative analysis. Its fast analysis and total workflow solution save valuable time in clinical practice. Visit Medis at Booth 38 for more information.

MedVoxel Systems, Inc. — Booth 35

7363-515 West Hastings St
Vancouver, BC V6B 5K3
Canada
Tel: 778-782-7759
Fax: 778-782-7977
Web: www.medvoxel.com

MedVoxel Systems Inc. (MedVoxel) is software-as-a-service ("Saas") company that develops and markets innovative imaging post-analysis solutions for cardiologists and radiologists.

MedVoxel's HeartPro Software Application (HeartPro) is a suite of cardiac MRI post-analysis tools. It is faster and more adaptable with its strong understanding of customers needs and its scientific research and the implementation capabilities.

HeartPro is a pioneering product that has been tested and proved in international and U.S. clinical environment. It is FDA 510(K) cleared.

Philips Healthcare — Booth 26

PO Box 10,000
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The Netherlands
Tel: +31 40 2765608
Web: www.philips.com

Royal Philips Electronics of the Netherlands is a diversified Health and Well-being company, focused on improving people's lives through timely innovations. As a world leader in healthcare, Philips integrates technologies and design into people-centric clinical solutions, based on fundamental customer insights and "sense and simplicity". A recent example is the Ingenia, world's first broadband digital MR scanner with patient-adapted multi-channel RF technology for crystal clear imaging, remarkable speed and robust cardiac MR results on 3.0T.

Pie Medical Imaging — Booth 31

Becanusstraat 13d
Maastricht 6216BX
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Tel: +31 43 328 13 28
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Email: pmi-exhibitor@pie.nl
Web: www.piemedicalimaging.com

Pie Medical Imaging offers quantitative cardiovascular analysis software for cardiac MR. The CAAS MRV software allows for a Functional analysis of the ventricles, a Viability (DE) and First Pass Perfusion analysis and also is available for small animal research.

The CAAS MR Flow software is designed to quantify flow and velocities in PCA MR images.

Precision Image Analysis International — Booth 33

815-18th Avenue
West Kirkland, WA 98033
Tel: 425-822-8199
Web: www.precisionanalysis.org

Precision Image Analysis (PIA) provides a service to analyze diagnostic images that is rapid, accurate and cost-effective. Currently, medical personnel can spend more than an hour post-processing imaging studies. PIA completes the quantification with a comprehensive summary report of measurement data at a turn-around time of less than 6 hours and is HIPAA compliant. All work is performed by highly trained technicians using commercially available software and supervised by a board-certified cardiologist.

Shelley Medical Imaging Technologies — Booth 12

157 Ashley Crescent
London, Ontario N6E 3P9
Canada
Tel: 519-690-0874
Email: bob.gravett@simutec.com
Web: www.simutec.com

A leader in MRI compatible and programmable heart motion phantoms, computer-controlled physiological blood flow pump simulators and anatomically correct vascular models for quantitative flow, angiographic (MRA, DSA, CTA, as well as iMRI, PIV & ultrasound), and endovascular device testing, validation and training.

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Siemens Healthcare — Booth 40

55 Valley Stream Parkway
Malvern, PA 19355
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Web: www.usa.siemens.com/healthcare

The Siemens Healthcare Sector is one of the world's largest suppliers to the healthcare industry and a trendsetter in medical imaging, laboratory diagnostics, medical information technology and hearing aids. Siemens offers its customers products and solutions for the entire range of patient care from a single source – from prevention and early detection to diagnosis, and on to treatment and aftercare. By optimizing clinical workflows for the most common diseases, Siemens also makes healthcare faster, better and more cost-effective. Siemens Healthcare employs some 51,000 employees worldwide and operates around the world.

Society for Cardiovascular Magnetic Resonance (SCMR) — Booth 3

19 Mantua Road
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The Society for Cardiovascular Magnetic Resonance (SCMR) is a professional association whose vision is to be the leading international representative and advocate for all physicians, scientists, and technologists working in CMR to improve patient outcomes through excellence in education, training, standards, research and development. It endeavors to be the principal international, independent organization committed to the further development of cardiovascular magnetic resonance through education, quality control, research, and training.

TomTec Imaging Systems GmbH — Booth 37

Edisonstrasse 6
Unterschleissheim 85716
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Web: www.tomtec.de

TomTec Imaging Systems is the worldwide leader for 2D-, 3D- and 4D-solutions in the area of medical ultrasound and medical information management (Healthcare IT).

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Toshiba — Booth 16

2441 Michelle Drive
Tustin, CA 92780
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Fax: 714-505-2076
Web: www.medical.toshiba.com

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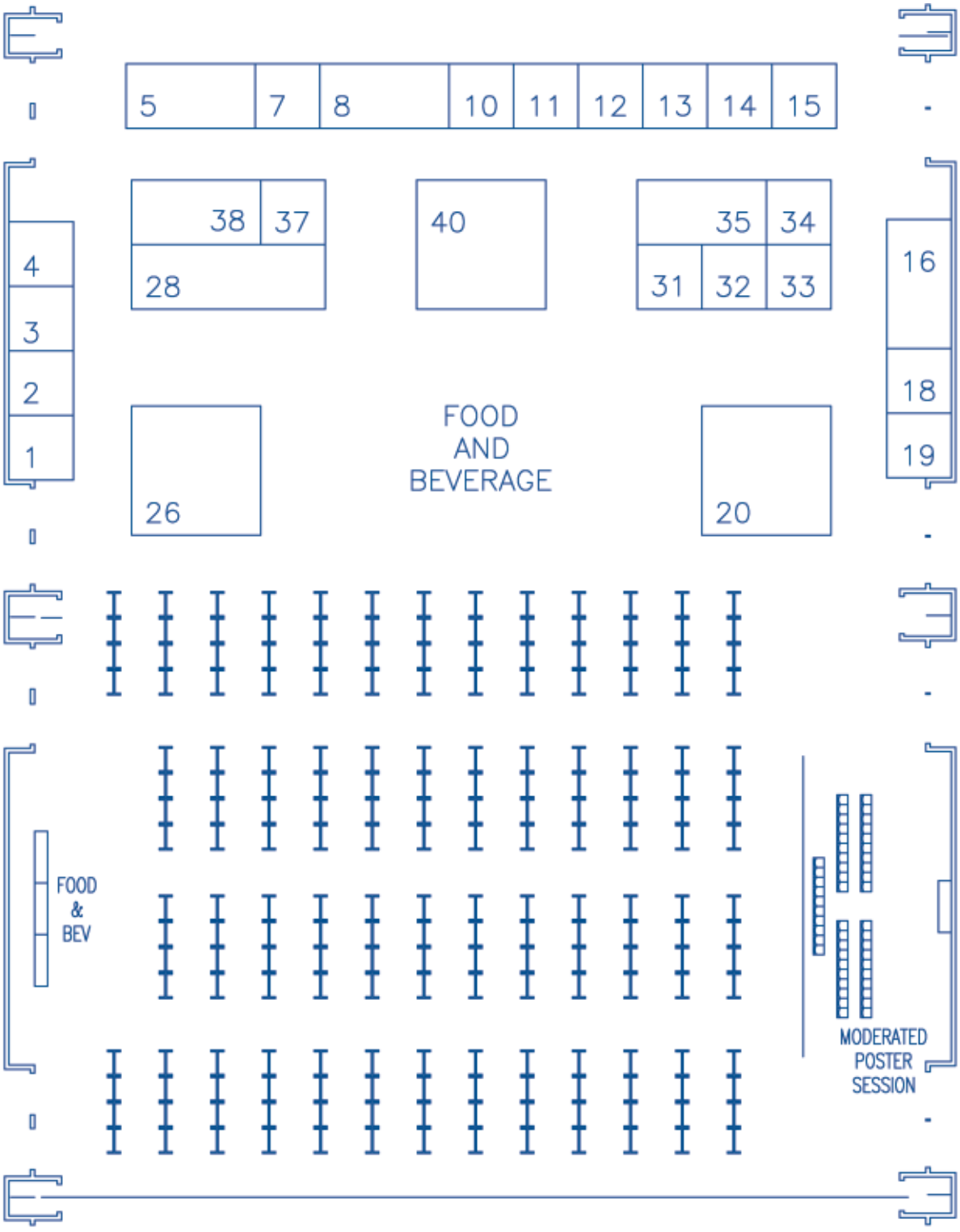
The Society for Cardiovascular Magnetic Resonance

February 2 - 5, 2012

Marriott World Center - Palms Ballroom & Exhibition Hall



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SCMR

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