Society for Cardiovascular Magnetic Resonance

16th Annual Scientific Sessions

January 30 - February 3, 2013

Hilton San Francisco Union Square
San Francisco, California

Jointly sponsored by SCMR and the University of Minnesota

www.scmr.org
### Schedule at a Glance

**Wednesday, January 30, 2013**

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<td>SCMR/ISMRM Jointly Sponsored Workshop - Day 1</td>
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**Thursday, January 31, 2013**

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Dear Colleagues and Friends,

Welcome to the 16th Annual Scientific Sessions of the Society for Cardiovascular Magnetic Resonance (SCMR). We are blessed by a beautiful environment for this meeting in San Francisco, California.

The annual meeting is one of the most important and most visible functions of the SCMR. This year, the program comprehensively addresses the latest scientific investigation using CMR to study health and disease. The program also offers an extensive clinical track and serious sessions on technical topics. The breadth of the program mirrors the diverse expertise and interests of our SCMR members. Whether an engineer, physicist, radiologist, congenital/pediatric specialist, cardiologist, or technologist, the program has sessions dedicated to each of these important components that make up the larger field of CMR.

I am particularly looking forward to the focus this year on high field cardiovascular CMR. The SCMR/ISMRM Jointly Sponsored Workshop and the Opening Plenary bring our most comprehensive coverage to date on this emerging aspect of CMR. Some may wonder why high field is important since CMR works so well at 1.5T. As attendees will see, there are applications that are enabled at high field that are not feasible at 1.5T. There are also the realities that many imaging centers have 3T scanners so it becomes imperative that we find ways to make CMR efficient on these and higher field systems. We are fortunate to have Kamil Ugurbil, Hildo Lamb, and Dudley Pennell speaking in the Opening Plenary on related topics.

We should not forget the strength of the educational components of the meeting. The clinical tracks offer a wide variety of case presentations that are interesting and graphically illustrate how CMR can help diagnose various diseases and conditions. Similarly, the morning sessions of Physics for Physicians and Cardiology for Non-cardiologists are aimed to develop the cross-fertilization that helps each side of the clinical and technical team understand how the other thinks about important issues and questions. For more extensive training, physicians can opt for the Physicians Pre-conference which is both an excellent introduction to the field as well as a comprehensive overview for review. Similarly, the Congenital/Pediatric Pre-conference is a course that focuses on issues specifically important to congenital disease and pediatric imaging.

The abstract sessions offer a glimpse of the future, both in terms of latest research and in terms of new scientists and physicians doing research in CMR. The best oral abstract and poster presentations will be selected for Early Career Awards, a difficult selection process due to the large number of truly excellent research studies. The number and quality of the submissions continues to exceed expectations so this year promises to be yet another great scientific session.

I hope you enjoy the meeting and make use of the time to catch up with friends and colleagues from around the world of CMR.

Andrew Arai, MD
President, SCMR
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.

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London, United Kingdom

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London, United Kingdom

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**Andrew Taylor, MD**
UCL Institute of Child Health
London, United Kingdom

**Holger Thiele, MD**
University of Leipzig
Leipzig, Germany

**Robert van der Geest, PhD**
Leiden University Medical Center
Leiden, The Netherlands

**Florian von Knobelsdorff, MD**
Charité Medical University
Berlin, Germany
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 differences between research and clinical routine
• Recommend an imaging modality to identify and diagnose cardiovascular disorders
• Integrate CMR into their professional settings

CONTINUING MEDICAL EDUCATION CREDIT INFORMATION

Scientific Sessions

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 University of Minnesota and the Society for Cardiovascular Magnetic Resonance. The University of Minnesota is accredited by the ACCME to provide continuing medical education for physicians.

The University of Minnesota designates this live activity for a maximum of 30.75 AMA PRA Category 1 Credit(s)™.

➢ Physician Pre-conference Course - 8 AMA PRA Category 1 Credits™
➢ Congenital/Pediatric Pre-conference Course – 8 AMA PRA Category 1 Credits™
➢ 2013 Scientific Sessions - 22.75 AMA PRA Category 1 Credits™

Physicians should claim only the 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 has been approved for credit by the American Society of Radiologic Technology (ASRT) for a maximum of 17.5 CE credits.

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

2013 Gold Medal Award

The Board of Trustees of the Society for Cardiovascular Magnetic Resonance (SCMR) is pleased to announce that Stefan Neubauer, MD, Professor of Cardiovascular Medicine and Clinical Director of the Centre for CMR Research at the University of Oxford, is the 2013 recipient of the SCMR Gold Medal Award. The award is presented annually by the SCMR for outstanding achievement in the field of CMR as well as exemplary service to the Society. Dr. Neubauer has excelled in both throughout his distinguished career.

Professor Neubauer began his research in CMR almost 30 years ago, and his work is considered to be the broadest of any investigator in this field. He has pioneered the development and application of CMR methods in both the experimental and clinical settings. The scope of his research has ranged from CMR imaging to spectroscopy, from mice to patients. Dr. Neubauer has contributed to the future of the field through his mentorship of students and fellows.

Dr. Neubauer has dedicated invaluable time and energy to SCMR. As President of the Society from 2006-2008, he guided its continued focus on the improvement and growth of CMR and instituted many of the initiatives to standardize clinical CMR which are in practice today. He has been on the Editorial Board of the JCMR since its inception and is presently an Associate Editor.

Please join the SCMR Board of Trustees at the Awards Ceremony on Saturday evening as the Society congratulates Dr. Neubauer on his achievements and thanks him for his dedication.

Past SCMR Gold Medal Awardees:
2012 Dudley Pennell, MD
2011 Charles Higgins, MD and Gerald Pohost, MD
General Information

Admission
Conference name badges are required for admission to all activities related to the 16th Annual Scientific Sessions, including the exhibit hall and social events.

Registration Hours
The 2013 SCMR Registration Desk is located in the Yosemite Ballroom Foyer. The Registration Desk will be open and staffed during the following hours:

- **Wednesday, January 30**: 12:00 pm – 6:30 pm
- **Thursday, January 31**: 7:00 am – 6:00 pm
- **Friday, February 1**: 6:30 am – 6:30 pm
- **Saturday, February 2**: 6:30 am – 6:30 pm
- **Sunday, February 3**: 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
- Heart Imaging Technologies
- cvi+
- Medis medical imaging systems, Inc.

Exhibits
Educational and informational exhibits will be available in Grand Ballroom B 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 63-65.

- **Friday, February 2**: 10:00 am – 7:30 pm
- **Saturday, February 3**: 7:00 am – 4:00 pm

Pictures/Filming
SCMR requests that all attendees refrain from taking pictures and/or filming the presentations.

Mobile Devices
As a courtesy to the speakers and your fellow attendees, please switch your mobile device(s) to silent while attending the sessions.

Speaker Ready Room
The 2013 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 Franciscan C Room and will be open the following days and times:

- **Wednesday, January 30**: 5:00 pm – 8:00 pm
- **Thursday, January 31**: 7:00 am – 6:00 pm
- **Friday, February 1**: 7:00 am – 6:00 pm
- **Saturday, February 2**: 7:00 am – 6:00 pm
- **Sunday, February 3**: 7:00 am – 12:00 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. Specific faculty disclosure information for each speaker, course director, and planning committee member will be shared with the audience prior to the speaker's presentation.

A complete list of disclosures is available on pages 60-62.

Evaluations and CME Tracking Forms
At the conclusion of the SCMR Scientific Sessions, you will receive an invitation to complete the meeting survey. Please take the time to complete this survey as it provides very important feedback for future programming. Thank you, in advance, for completing the evaluation…your opinion and feedback matter!

You must complete the University of Minnesota CME Tracking Form in order to receive your CME certificate. After completing the Tracking Form, please return it to the SCMR Registration Desk or email it to SCMRMTG@talley.com. The information on the forms will be compiled and sent to the University of Minnesota for processing. The University of Minnesota will issue the CME certificate to you.
Physician Pre-conference Course

Thursday January 31, 2013

8:00 AM – 6:00 PM  Imperial Ballroom A

Physician’s Pre-conference Course Educational Objectives:
Upon completion of this educational activity, the participant should be better able to:
• 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

8:00 am – 8:10 am  Introductory Remarks
Co-chairs: Steffen Petersen, MD, PhD, Barts and The London NHS Trust
Subha Raman, MD, The Ohio State University

8:10 am – 9:50 am  Basics of CMR
8:10 am Basics: Spins and Hardware
Michael Salerno, MD, PhD, University of Virginia
8:30 am Black-blood Sequences
Rebecca Thornhill, MSc, University of Ottawa
8:50 am Bright-blood Sequences
Colin Berry, PhD, University of Glasgow
9:10 am Let’s Go Faster: Parallel Acquisition Techniques
Daniel Ennis, PhD, University of California-Los Angeles
9:30 am Dealing with Breathing Artifacts and Arrhythmia
Robert Judd, PhD, Duke Cardiovascular Magnetic Resonance Center

9:50 am – 10:10 am  Morning Break

10:10 am – 12:10 pm  How To Sessions
10:10 am How to Measure Regional and Global Ventricular Function
Steffen Petersen, MD, PhD, Barts and The London NHS Trust
10:30 am How to Quantify Blood Flow
Alex Pitcher, MD, The John Radcliffe Hospital
10:50 am How to Perform High-quality Delayed Enhancement
Alexander Dick MD, Sunnybrook Health Sciences Centre
11:10 am How to Optimize MR Angiography
Robert Edelman, MD, Evanston Hospital

11:30 am  How to Assess the Coronary Arteries Using CMR
Yuchi Han, MD, University of Pennsylvania

11:50 am  How to Assess Myocardial Iron Overload
John-Paul Carpenter, MD, Royal Brompton & Harefield NHS Foundation Trust

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
J. Ronald Mikolich, MD, Sharon Regional Health System
1:30 pm CMR to Assess the Etiology of Cardiomyopathy
Carlos Rochitte, MD, Heart Institute - InCor
1:50 pm CMR in the Assessment of Arrhythmic Substrate
Ralf Wassmuth, MD, Charité Medical University and HELIOS
2:10 pm CMR in Suspected Acute Myocarditis
Ian Paterson, MD, University of Alberta
2:30 pm CMR in Myocardial Ischemia
Stephen Harden, MD, University Hospital Southampton
2:50 pm CMR in Myocardial Viability
Anna Herrey, MD, Heart Hospital London

3:10 pm – 3:40 pm  Afternoon Break

3:40 pm – 5:20 pm  Clinical Applications of CMR - Part 2
3:40 pm CMR in Congenital Heart Disease
Anne Marie Valente, MD, Children’s Hospital Boston
4:00 pm CMR in Valvular Disease
Gerald McCann, BSc, MB, ChB, University Hospitals of Leicester
4:20 pm CMR in Pericardial Disease
Frederick Ruberg, MD, Boston University School of Medicine
4:40 pm CMR in the Assessment of Intracardiac Mass
Jonathan Weinsaft, MD, Cornell University
Physician Pre-conference Course

5:00 pm  Knowing When to Choose CMR in a Multimodality Imaging Climate
Francesca Pugliese, MD, PhD, Barts and The London NHS Trust

5:20 pm – 6:00 pm  Panel Discussion of Submitted Questions
Patricia Bandettini, MD, NHLBI
Chiara Bucciarelli-Ducci, MD, Bristol Heart Institute
Matthias Friedrich, MD, CMR Centre at the Montreal Heart Institute
Jonathan Leipsic, MD, University of British Columbia
Albert van Rossum, MD, PhD, VU Medical Center

Congenital/Pediatric Pre-conference Course

Thursday January 31, 2013

8:00 AM – 6:00 PM  Imperial Ballroom B

Congenital/Pediatric Pre-conference Course Educational Objectives:
Upon completion of this educational activity, the participant should be better able to:
• Discuss current and new applications where CMR helps in the diagnosis or management of congenital and adult congenital cardiovascular disease
• Describe what CMR technology can provide in the management of congenital heart disease

8:00 am – 8:05 am  Introductory Remarks
Co-chair: Lars Grosse-Wortmann, MD, Hospital for Sick Children

8:05 am – 9:50 am  Session I – Setting the Stage
8:05 am  Speaking the Same Language: Sequential Segmental Approach to Cardiac Anatomy
Shi-Joon Yoo, MD, Hospital for Sick Children

8:50 am  Smaller, Faster, and Moving: Strategies for Scanning Young and Very Young Patients
Taylor Chung, MD, Children's Hospital and Research Center

9:20 am  Getting the Best of All Worlds: Echo, CMR, CTA
Ashwin Prakash, MD, Children's Hospital Boston

9:50 am – 10:10 am  Morning Break

10:10 am – 12:10 pm  Session II – Pediatric CMR Tools
10:10 am  Ventricular Volumes: How to Get and How to Interpret Them
Margaret Samyn, MD, Children's Hospital of Wisconsin

10:30 am  Outside the Heart: Angiography with and without Contrast
Tarique Hussain, MD, King's College London

10:55 am  Viability Imaging in Pediatric Heart Disease
Aurielo Secinaro, MD, Ospedale Pediatrico Bambino Gesù

11:15 am  Cardiac Masses: Non-invasive Tumor Characterization with CMR
Beth Printz, MD, PhD, University of California-San Diego

11:35 pm  Pulmonary Hypertension Assessment with MR
Vivek Muthurangu, MD, Centre for Cardiovascular Imaging

11:55 pm  Q and A/Discussion

12:10 pm – 1:10 pm  Lunch (on own)

1:10 pm – 3:10 pm  Session III – Main Clinical Indications
1:10 pm  The Big Three: Tetralogy of Fallot, Transposition, and Coarctation of Aorta
Andrew Powell, MD, Children's Hospital Boston

1:50 pm  The Cardiomyopathies: ARVC, DCM, HCM
Lars Grosse-Wortmann, MD, Hospital for Sick Children

2:20 pm  Hypoplastic Left Heart Syndrome: CMR through the Stages
Kevin Whitehead, MD, PhD, Children's Hospital of Philadelphia

2:50 pm  Rings, Slings, and Things
Karen Ordovas, MD, University of California-San Francisco
SCMR 2013 Pre-conference Courses

Congenital/Pediatric Pre-conference Course

3:10 pm – 3:40 pm  Afternoon Break

3:40 pm - 5:45 pm  Session IV – Applying Your Skills

3:40 pm  How to Combine Flow and Function: Quantifying Shunts, Regurgitation, Obstruction
Shaine Morris, MD, Texas Children’s Hospital

4:10 pm  How to Get It Across: Composing Your Best CMR Report
William Drake, MD, MS, The Children’s Mercy Hospital

4:30 pm  Putting It All Together: Clinical Cases with an Edge

4:30 pm  Matthew Harris, MD, Children’s Hospital of Philadelphia

4:45 pm  Ruchira Garg, MD, Miami Children’s Hospital

5:00 pm  Adam Dorfman, MD, University of Michigan Health Systems

5:15 pm  Tiffany Johnson, MD, Riley Hospital for Children

5:30 pm  Questions and Open Communication
Joaichim Eichorn, MD, University Children’s Hospital
Lars Grosse-Wortmann, MD, Hospital for Sick Children

JOIN SCMR TODAY!

Membership Benefits
Free authorship in the open access publication Journal of Cardiovascular Magnetic Resonance
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Membership Descriptions

Regular Member  A physician, scientist or industry (community) member who satisfies the requirements of good character and who has demonstrated an interest in cardiovascular magnetic resonance. All regular members have the right to hold office and vote providing that dues are paid and current.

Trainee Member  Physicians in training, doctoral candidates and post-doctoral fellows who are receiving training, experience or competence in cardiovascular magnetic resonance. Trainee members are eligible for up to 4 years and must provide a letter of verification of active training from their institution yearly. Trainee members may vote and serve on committees.

Technologist/Allied Health Member  Two years active, direct experience in the field are required to become a technologist/allied health member having the right to vote and to hold office, providing that dues are paid and current.

Emeritus Member  Emeritus member status is available to a member in good standing for the previous five years who is retired from active practice, teaching and research, and is at least 65 years of age. Applications are reviewed and approved by the Executive Committee. Emeritus members cannot hold elected office or serve as committee chairs, but do receive member discounts to meetings, may vote and serve on committees.

Associate Member  The Associate Membership category is available to medical professionals (MD and PhD) who work in developing countries where the prevailing wage makes regular Society membership dues unaffordable. The features and application procedure are detailed on the SCMR website.

Visit the SCMR website www.scmr.org for additional membership and Society information.
Friday, February 1, 2013

6:45 am – 8:00 am  Continental Breakfast  Grand Ballroom B

7:00 am – 8:00 am  Physics for Physicians 1  Imperial  Ballroom A
Moderators: Sonia Nielles-Vallespin, PhD, NIH
David Firmin, MD, Royal Brompton Hospital

7:00 am  Hardware: Scanner and Basic Spin Gymnastics
Michael Markl, PhD, Northwestern University

7:15 am  Basic MR Sequence and Reconstruction
David Firmin, PhD, Royal Brompton Hospital

7:30 am  Different Sequence Contrasts
Peter Boernert, PhD, Philips Research

7:45 am  Q and A/Discussion

7:00 am – 8:00 am  Cardiology for Non-cardiologists  Imperial Ballroom B
Moderators: Peter Buser, MD, University Hospital Basel
Karen Ordovas, MD, University of California - San Francisco

7:00 am  Atherosclerosis from A to Z
Monvadi Srichai-Parsia, MD, New York University

7:20 am  Myocardial Reaction to Ischemia
John Greenwood, MBChB, PhD, University of Leeds

7:40 am  Case Presentation: Ischemic Cardiomyopathy with CMR Stress Imaging
Rolf Gebker, MD, German Heart Institute Berlin

7:50 am  Q and A/Discussion

7:00 am - 8:00 am  Case Review Session 1 - Yosemite A-B Perfusion Imaging by CMR: Both Usual and Unusual Cases
Moderators: Colin Berry, PhD, University of Glasgow
Sven Plein, MD, PhD, University of Leeds

Why Is This Nurse Still Breathless after His Primary PCI? Should We Open It or Close It?
Mohammed Khanji, MB BCh, Queen Mary University of London

A Troublesome Coronary - Can We Fix It?
(A CMR verdict.)
Djeven Deva, MD, St. Michael's Hospital

A Congenital Conundrum - Not Normal for Noonans!
Andrew Crean, MD, Toronto General Hospital

Is Stress CMR Useful in the Management of a Patient with Severe Cad?
Ermanno Capuano, MD, Queen Mary University of London

Case Presentation - Perfusion
Gerry McCann, BSc,MB,ChB,MRCP, University Hospital Leicester

8:00 am – 8:15 am  Welcome and Opening Comments  Grand Ballroom A
Andrew Arai, MD, SCMR President

8:15 am – 9:30 am  Opening Plenary Session  Grand Ballroom A
Moderators: Jens Bremerich, MD, University of Basel
Jeanette Schulz-Menger, MD, Charité Medical University and HELIOS

Upon completion of this educational activity, the participant should be better able to:
• Identify recent developments in CMR
• Discuss the impact of fat imaging for risk stratification
• Explain the current stage of diffusion imaging

8:15 am  Learning Lessons from the Brain: Human Connectome – Connected to the Heart?
Kamil Ugurbil, PhD, University of Minnesota

8:35 am  Impact of Fat for Differentiation and Risk Stratification
Hildo Lamb, MD, PhD, Leiden University Medical Center

8:55 am  New Techniques: Diffusion from Dream to Earth
Dudley Pennell, MD, Royal Brompton Hospital

9:15 am  Q and A/Discussion

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

10:00 am – 10:30 am  Morning Break/ Posters/Exhibits  Grand Ballroom B
Scientific Sessions

10:30 am – 12:00 pm Concurrent Sessions

10:30 am Invited Lecture Session 1 – Grand Ballroom A
  MRI Guided Interventions
  Moderators: Robert Balaban, MD, NIH
  Frederick Epstein, PhD, University of Virginia
  Upon completion of this educational activity, the participant should be better able to:
  • Recognize the benefits of MRI guided cardiac catheterization
  • Review clinical experience of MRI guided right heart catheterization
  • Understand the role of MR imaging methods to characterize scar for treatment planning and ablation lesions for outcomes assessment in patients with complex arrhythmias

10:30 am MRI Guided Right Heart Catheterization: Clinical Experience
  Kanishka Ratnayaka, MD, NHLBI

10:50 am Novel Devices for Interventional MRI
  Charles Dumoulin, PhD, Cincinnati Children’s Hospital Medical Center

11:10 am MRI Guided EP: Planning and Assessment
  Graham Wright, PhD, Sunnybrook Health Sciences Centre

11:30 am MRI Guided EP: Procedure Guidance
  Matthias Guberlet, MD, PhD, University Leipzig/Heart Center Leipzig

10:30 am Case Review Session 2 - Yosemite A-B
  How Tissue Mapping Made a Difference
  Moderators: James Moon, MD, The Heart Hospital
  Mark Westwood, MD, The London Chest Hospital

  Left Atrial Appendage Thrombus; Young or Old? Role of CMR in Definition
  Sahadev Reddy, MD, Allegheny General Hospital

  Acute Myocarditis Healing as seen by Serial Cardiac Magnetic Resonance Imaging: A Case Report
  Tamara Rothstein, CDPI - Clínica de Diagnóstico por Imagem

10:30 am Oral Abstract Session 1 - Imperial Ballroom A
  Early Career Award - Basic Science
  Dedicated to the memory of Stefan Fischer
  Moderators: Stefan Neubauer, MD, University of Oxford
  Debiao Li, PhD, Cedars-Sinai Medical Center

  O 1 Ungated Cine First-Pass CMR for Concurrent Imaging of Myocardial Perfusion Defects and Wall Motion Abnormalities
  Behzad Sharif, PhD, Cedars-Sinai Medical Center

10:45 am O 2 Cellular Hypertrophy Occurs before Interstitial Fibrosis in Pressure-overload Heart Failure
  Ravi Shah, MD, Brigham and Women’s Hospital

11:00 am O 3 Eliminating Dark-Rim Artifacts in First-Pass Myocardial Perfusion Imaging
  Behzad Sharif, PhD, Cedars-Sinai Medical Center

11:15 am O 4 Molecular Assessment of Aortic Aneurysm Wall Integrity Using an Elastin-Specific MR Imaging Probe
  Marcus Makowski, MD, King’s College London

11:30 am O 5 Improved Fat Signal Suppression for Coronary MRA at 3T Using a Water-Selective Adiabatic T2-Prep Technique
  Andrew Coristine, University of Lausanne

11:45 am O 6 High Resolution Spiral Myocardial Phase Velocity Mapping (PVM) of the Entire Cardiac Cycle
  Robin Simpson, MPhys, Royal Brompton Hospital

10:30 am Oral Abstract Session 2 - Imperial Ballroom B
  Cost Effectiveness of CMR, CT, Echo and Scintigraphy in Ischemic and Valvular Heart Disease
  Moderators: Peter Buser, MD, University Hospital Basel
  Karen Ordovas, MD, University of California - San Francisco

10:38 am O 7 Cost-Effectiveness of Magnetic Resonance Imaging in Coronary Heart Disease: An Economic Evaluation Using Data from the CE-MARC Study
  John Greenwood, MBChB, PhD, University of Leeds

10:50 am O 8 Cost-effectiveness of Dobutamine Stress Cardiac Magnetic Resonance Imaging in Stable Coronary Artery Disease – A Post-hoc Analysis
  Sebastian Kelle, MD, PhD, German Heart Institute Berlin

11:02 am O 9 Stress Myocardial Perfusion Cardiac Magnetic Resonance Imaging vs. Coronary CT Angiography in the Diagnostic Work-up of Patients with Stable Chest Pain: Comparative Effectiveness and Costs
  Steffen Petersen, MD, PhD, Barts and The London NHS Trust

www.scmr.org
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Location</th>
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<tbody>
<tr>
<td>11:14 am</td>
<td>Comparative Use of Exercise Tolerance Testing, SPECT and CMR, Alone and in Combination, for the Diagnosis of Coronary Heart Disease in the CE-MARC Study</td>
<td>John Greenwood, MBChB, PhD, University of Leeds</td>
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<tr>
<td>11:26 am</td>
<td>Discrepancies in Ejection Fraction Measurements between Echocardiography and Cardiovascular Magnetic Resonance Lead to Different Clinical Classifications</td>
<td>Florian Andre, MD, University of Heidelberg</td>
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<tr>
<td>11:38 am</td>
<td>Accuracy of Aortic Root Annulus Assessment with Cardiac Magnetic Resonance in Patients referred for Transcatheter Aortic Valve Implantation: A Comparison with Multi-Detector Computed Tomography</td>
<td>Gianluca Pontone, Centro Cardiologico Monzino IRCCS</td>
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<td>11:50 am</td>
<td>Q and A/Discussion</td>
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<tr>
<td>12:00 pm</td>
<td>SCMR Business Meeting</td>
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<td>Grand Ballroom A</td>
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<td>12:30 pm</td>
<td>Lunch (on own)/Posters/Exhibits</td>
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<tr>
<td>1:30 pm</td>
<td>Invited Lecture Session 2 – Coronary Imaging in 2013</td>
<td>Warren Manning, MD, Beth Israel Deaconess Medical Center</td>
<td>Grand Ballroom A</td>
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<tr>
<td>1:45 pm</td>
<td>Coronary Wall: Is Thickness the Holy Grail?</td>
<td>Michael McConnell, MD, Stanford University</td>
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<td>2:00 pm</td>
<td>The Aortic and Carotid Lumen: Contrast is Key</td>
<td>Jens Bremerich, MD, University Hospital Basel</td>
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<td>2:15 pm</td>
<td>Peripheral Lumen: The Promise of Non-contrast Methods</td>
<td>James Carr, PhD, Northwestern University</td>
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<td>2:30 pm</td>
<td>Multi-spectral Imaging of the Non-coronary Wall</td>
<td>Chun Yuan, PhD, University of Washington</td>
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<td>2:45 pm</td>
<td>Q and A/Discussion</td>
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<tr>
<td>1:30 pm</td>
<td>Case Review Session 3 - Great CMR Cases to make a Controversial Point</td>
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<td>Yosemite A-B</td>
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<tr>
<td>1:30 pm</td>
<td>3 Tesla is Great for Pediatric CMR - This Is Why</td>
<td>Christopher Hart, MD, Universitaetsklinik Kiel</td>
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<tr>
<td>1:45 pm</td>
<td>3 Tesla is Disappointing in Pediatric CMR - This Is Why</td>
<td>Michael Taylor, MD, PhD, Cincinnati Children’s Hospital Medical Center</td>
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<tr>
<td>2:00 pm</td>
<td>CMR in Pregnant Women with CHD - Does It Make a Difference in Management?</td>
<td>Rachel Wald, MD, Hospital for Sick Children</td>
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<tr>
<td>2:15 pm</td>
<td>Low-dose CT is Preferable to CMR for Complex Cardiovascular Anatomy - This Is Why</td>
<td>Matthias Gutberlet, MD, University Leipzig/Heart Center Leipzig</td>
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<tr>
<td>2:30 pm</td>
<td>CMR Myocardial Perfusion in Children: Why It’s Useful in Clinical Practice</td>
<td>Emanuela Valsangiacomo-Buechel, MD, Kinderspital Zuerich</td>
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<td>2:45 pm</td>
<td>Imaging Coronary Artery Anomalies: How Done Best to Assess SCD Risk?</td>
<td>Paolo Angelini, MD, Texas Heart Institute</td>
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<tr>
<td>1:30 pm</td>
<td>Oral Abstract Session 3 – Early Career Award - Basic Translational</td>
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<td>Imperial Ballroom A</td>
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<tr>
<td>1:30 pm</td>
<td>13 A New Definition of Left Ventricular Compaction/Noncompaction – The New Gold-Standard?</td>
<td>Gaby Captur, SpR, The Heart Hospital</td>
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<tr>
<td>1:45 pm</td>
<td>T1 Mapping for Myocardial Extracellular Volume Measurement by Cardiovascular Magnetic Resonance: Bolus Only vs Primed Infusion Technique</td>
<td>Steven White, BSc, MBChB, The Heart Hospital</td>
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Upon completion of this educational activity, the participant should be better able to:

- Describe the current status of coronary MRI for the detection of luminal coronary disease
- Recognize the value of anatomical indices and their link with early atherosclerosis
- Recognize the value of contrast enhancement mechanisms for atherosclerosis characterization in the aorta and the carotids
- Make an informed decision to whether or not to use contrast for peripheral angiography
Scientific Sessions

2:00 pm  O 15  Myocardial Salvage by T2W-CMR: Direct Comparison to a Non-Destructive, High Resolution, 3-Dimensional Ex-Vivo Assessment of the Area At Risk Simultaneous with Infarction
Lowie Van Assche, MD, Duke University

2:15 pm  O 16  Histological Validation of Dynamic-Equilibrium Cardiovascular Magnetic Resonance for the Measurement of Myocardial Extracellular Volume
Christopher Miller, MBChB, University Hospital of South Manchester

2:30 pm  O 17  Evaluating the Extent of Acute Radiofrequency Ablation Lesions in the Heart: Using an Inversion Recovery SSFP Sequence
Haydar Celik, PhD, Sunnybrook Research Institute

2:45 pm  O 18  Magnetic Resonance Imaging of Acute and Chronic Atrial Ablation Injury – A Histological Validation Study
James Harrison, MA BM BCh, King’s College London

1:30 PM  Oral Abstract Session 4 - Imperial Ballroom B Non-ischemic Heart and Multiorgan Diseases
Moderators: Raymond Kwong, MD, MPH, Brigham and Women’s Hospital
Valentina Puntmann, MD, PhD, King’s College London

1:30 pm  Introductory Presentation
Raymond Kwong, MD, MPH, Brigham and Women’s Hospital

1:38 pm  O 19  Quantitative Assessment of Myocardial Extracellular Volume Fraction in Non-ischemic Dilated Cardiomyopathy and Its Relation to Systolic Dysfunction
Aamir Ali, MBChB, Royal Brompton Hospital

1:50 pm  O 20  Insulin Resistance, Subclinical Left Ventricular Remodeling, and the Obesity Paradox: The Multi-Ethnic Study of Atherosclerosis
Ravi Shah, MD, Brigham and Women’s Hospital

2:02 pm  O 21  T1 Measurements Identify Extracellular Volume Expansion in a Genotyped Hypertrophic Cardiomyopathy in Population With and Without Left Ventricular Hypertrophy
Siddique Abbasi, MD, Brigham and Women’s Hospital

2:14 pm  O 22  Native T1 Mapping by Cardiovascular Resonance Imaging Detects Subclinical Cardiomyopathy in Patients with Systemic Lupus Erythematosus
Valentina Puntmann, MD, PhD, King’s College London

2:26 pm  O 23  Cardiac Magnetic Resonance in Acute Rheumatic Fever
Alfredo Augusto Eyer Rodrigues, MD, Federal University of Sao Paulo

2:38 pm  O 24  Impaired Myocardial Perfusion in Moderate Asymptomatic Aortic Stenosis Relates to Longitudinal Strain but Not Non-contrast T1 Values
Sacha Bull, MRCP, Oxford Centre for Clinical Magnetic Resonance Research

2:50 pm  Q and A/Discussion

3:00 PM – 3:30 PM  Afternoon Break/Posters/Exhibits

3:30 PM – 5:00 PM  Concurrent Sessions

3:30 pm  Invited Lecture Session 3 - Grand Ballroom A Multi-modality Imaging – To Enhance Therapy Guidance
Moderators: David Bluemke, MD, PhD, NIH
Aloha Meave, MD, Instituto Nacional de Cardiologia

Upon completion of this educational activity, the participant should be better able to:
• Describe the role of multi-detector CT in the assessment of coronary artery disease
• Describe the role of PET for coronary artery disease assessment
• Describe clinical scenarios for which MRI may complement echocardiographic assessment

3:30 pm  CT: Current Role in Management of CAD
Christian Loewe, MD, University of Vienna

3:50 pm  To Set-up a Hybrid Imaging Lab: Motivation and Challenges
Pamela Woodard, MD, Mallinckrodt Institute of Radiology

4:10 pm  Echocardiographical Scenarios That Need Complementary Methods
Katherine Wu, MD, Johns Hopkins Medicine

4:30 pm  PET-MR: Potential Clinical and Research Applications
Jean-Paul Vallee, MD, Hopitaux Universitaires de Geneve

4:50 pm  Q and A/Discussion
3:30 pm Case Review Session 4 - Yosemite A-B
Cardiac Masses: Correlating Imaging with Pathology
Moderators: Richard Coulden, MD, University of Alberta Hospitals
Dipan Shah, MD, Methodist DeBakey Heart & Vascular Center

Fibroelastoma of the Mitral Valve in a 10 Year Old Patient – Imaging, Therapy and Pathology
Christoph Preuss, MD, University Medical Center Goettingen

Right Atrial Mass with Constrictive Pericarditis
Vinetta Sethi, MD, The Ottawa Hospital

3:30 pm Oral Abstract Session 5 – Imperial Ballroom A
Cardiac Physiology and Metabolism
Moderators: Rene Botnar, PhD, King’s College London
Frank Rademakers, MD, PhD, University Hospitals Leuven

3:30 pm Introductory Presentation
Frank Rademakers, MD, PhD, University Hospitals Leuven

3:38 pm O 25 Comprehensive Cardiac Magnetic Resonance Imaging and Spectroscopy Reveals a High Burden of Myocardial Disease in HIV Infection
Cameron Holloway, MBBS, St. Vincent’s Hospital, Sydney

3:50 pm O 26 A Vasodilator Stress MRI Perfusion Study: Large HDL Particle Number is Independently Associated with Microvascular Function in Patients with LDL-C <100mg/dL
Akhil Narang, MD, University of Chicago

4:02 pm O 27 Myocardial Steatosis and Impaired Energetics are Independent Predictors of Regional Contractile Function in Patients with Severe Aortic Stenosis
Masliza Mahmod, MBChB, University of Oxford

4:14 pm O 28 Left Ventricular Torsional Hysteresis in Patients with Hypertension: A Global Parameter for Diastolic Function
Himanshu Gupta, MD, University of Alabama at Birmingham

4:26 pm O 29 Skeletal Muscle ATP Kinetics during Exercise in Patients with Systolic Heart Failure
Gurusher Panjrath, MD, Johns Hopkins Medicine

4:38 pm O 30 The Effects of Excess Weight on Cardiac Strain and Steatosis in Adults and Children
Rajarshi Banerjee, MRCP, MPH, University of Oxford

4:50 pm Q and A/Discussion

3:30 pm Oral Abstract Session 6 - Imperial Ballroom B
Quantification in Primary and Secondary CMP
Moderators: Daniela Foell, MD, University Hospital Freiburg
Matthias Friedrich, MD, CMR Centre at the Montreal Heart Institute

3:30 pm Introductory Presentation
Matthias Friedrich, MD, CMR Centre at the Montreal Heart Institute

3:38 pm O 31 Prevalence of Increased Myocardial Extracellular Volume Fraction in Dilated Cardiomyopathy
Magnus Lundin, M.Sc. Engg, Karolinska Institutet

3:50 pm O 32 Role of T1 and T2-Mapping in Assessing the Myocardial Interstitium in Hypertrophic Cardiomyopathy: A Cardiovascular Magnetic Resonance Study
Tevfik Ismail, BSc(Hons), MB BS, MRCP, Royal Brompton Hospital

4:02 pm O 33 Incremental Predictive Value of Deep Crypts in the Basal Inferoseptum in the Setting of Hypertrophic Cardiomyopathy
Djeven Deva, MD, University of Toronto

4:14 pm O 34 Multiorgan ECV as Measured by EQ-MRI in Systemic Amyloidosis
Sanjay Banypersad, MD, The Heart Hospital

4:26 pm O 35 Cardiac Magnetic Resonance Circumferential Strain Predicts Myocardial Fibrosis in DMD-associated Cardiac Disease
Kan Hor, MD, Cincinnati Children’s Hospital Medical Center

4:38 pm O 36 A New Variant of Apical Hypertrophic Cardiomyopathy? T Wave Inversion and Relative but not Absolute Apical Left Ventricular Hypertrophy
Andrew Flett, MBBS, BSc, The Heart Hospital

4:50 pm Q and A/Discussion
Scientific Sessions

5:00 PM – 6:30 PM  Concurrent Sessions

5:00 pm  Invited Lecture Session 4 -  Grand Ballroom A
CAD - Perfusion: the Macro - and Microvasculature
Moderators: Sven Plein, MD, PhD, University of Leeds
Orlando Simonetti, PhD, The Ohio State University
Upon completion of this educational activity, the participant should be better able to:
• Understand the role of CMR perfusion imaging as a tool for diagnosis and prognosis of CAD patients
• Discuss how CMR perfusion can be utilized in the assessment of microvascular disease
• Recognize the roles for measurements of myocardial perfusion, oxygenation, and metabolism

5:00 pm  Overview: CMR vs. Other Perfusion Modalities
Sven Plein, MD, PhD, University of Leeds

5:20 pm  CMR Perfusion for Prognosis
Rory Hachamovitch, MD, Cleveland Clinic

5:40 pm  CMR Perfusion for Assessment of Microvascular Disease
Amedeo Chiribiri, MD, King's College London

6:00 pm  Perfusion vs. Oxygenation vs. Metabolism - Competitive or Complimentary
Stefan Neubauer, MD, University of Oxford

6:20 pm  Q and A/Discussion

5:00 pm  Case Review Session 5 -  Yosemite A-B
Not Your Bread and Butter Cases
Moderators: Victor Ferrari, MD, University of Pennsylvania
Michael Steigner, MD, Brigham and Women's Hospital

Acute Myocardial Infarction in Churg Strauss Cardiomyopathy
Christopher Francois, MD, University of Wisconsin-Madison

A Case of Whipple's Pericarditis
Vinetta Sethi, MBBS, MD, The Ottawa Hospital

Cardiac MRI in Assessment of Mitral Para-Valvular Leaks
Chesnal Arepalli, MD, Emory University School of Medicine

Opposite Ends of the Spectrum in the Cardiomyopathy of Friedreich's Ataxia: Subtle and Overt Fibrosis Demonstrated by CMR
Aparna Deshpande, MRCP FRCR, Toronto General Hospital

5:00 pm  Oral Abstract Session 7 -  Imperial Ballroom A
Imaging of Function in Congenital Heart Disease
Moderators: Matthias Gutberlet, MD, PhD, University Leipzig/Heart Center Leipzig
Andrew Powell, MD, Children's Hospital Boston

5:00 pm  Introductory Presentation
Matthias Gutberlet, MD, PhD, University Leipzig/Heart Center Leipzig

5:08 pm  O 37  Quantification of Aortic Valve Regurgitation by Phase-Contrast Magnetic Resonance in Patients with Bicuspid Aortic Valve: Where to Measure the Flow?
Stefano Muzzarelli, MD, University Hospital Lausanne

5:20 pm  O 38  New Insights in the Fontan-circulation: 4-dimensional Respiratory- and ECG-triggered Phase Contrast Magnetic Resonance Imaging
Christopher Hart, MD, Universitaetsklinik Kiel

5:32 pm  O 39  Late Repair of Tetralogy of Fallot is Associated with Increased Aortic Stiffness: A Retrospective CMR Cohort Study
Jason Christensen, MD, University of Michigan

5:44 pm  O 40  Tricuspid Annular Plane Systolic Excursion by Cardiac MRI Has Poor Correlation with RVEF in Pediatric Patients
Emem Usoro, Meharry Medical College

5:56 pm  O 41  Evaluation of Atrial Volume and Function with Magnetic Resonance Imaging in Hypoplastic Left Heart
Chodchanok Vijarnsorn, MD, University of Alberta

6:08 pm  O 42  Quantification of Left Ventricular Regional Myocardial Function Using MRI Feature Tracking in Healthy Children – A Dual-center Study
Joachim Eichhorn, MD, University Children's Hospital Boston

5:00 pm  Scleroderma Affecting the Heart: An ARVC Mimic
Vinetta Sethi, MBBS, MD, The Ottawa Hospital

Acute MI with a Small Pseudoaneurysm
Siddique Abbasi, MD, Brigham and Women's Hospital

5:08 pm  Acute MI with a Small Pseudoaneurysm
Siddique Abbasi, MD, Brigham and Women's Hospital

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Jason Christensen, MD, University of Michigan

6:08 pm  Quantification of Left Ventricular Regional Myocardial Function Using MRI Feature Tracking in Healthy Children – A Dual-center Study
Joachim Eichhorn, MD, University Children's Hospital Boston

6:20 pm  Q and A/Discussion
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<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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</table>
| 5:00 pm | Oral Abstract Session B - Impact of Extracardiac Disease on Cardiac Structure and Function | Moderators: Amit Patel, MD, University of Chicago
Gerald Pohost, MD, University of Southern California |
| 5:00 pm | Introductory Presentation                                                   | Gerald Pohost, MD, University of Southern California |
| 5:08 pm | O 43 RV Dysfunction by MRI Is Associated with Elevated Transpulmonary Gradient and Poor Prognosis in Patients with Sickle Cell Associated Pulmonary Hypertension | Kim-Lien Nguyen, MD, NHLBI |
| 5:20 pm | O 44 Coronary Endothelial Function Is Directly Related to Extent of Weight Loss in Obese Patients | Allison Hays, MD, Johns Hopkins Medicine |
| 5:32 pm | O 45 Dobutamine Induced Changes in Aortic Stiffness: Influence of Obesity in Middle Aged and Elderly Individuals with Hypertension, Diabetes or Coronary Artery Disease | Sujethra Vasu, MD, Wake Forest University |
| 5:44 pm | O 46 Unfavorable Metabolic Changes are Accompanied by Impaired Myocardial Function Shortly After Chemotherapy | R. W. van der Meer, MD, Leiden University Medical Center |
| 5:56 pm | O 47 Myocardial Tissue Characterisation with Late Gadolinium Enhancement In Rheumatoid Arthritis, Systemic Lupus Erythematosus and Systemic Sclerosis | Ntobeko Ntusi, MBChB, University of Oxford |
| 6:08 pm | O 48 Detection and Potential Mechanisms of Subclinical Left Ventricular Dysfunction in Asymptomatic Young Adults with Type-2 Diabetes | Jamal Khan, MBChB, University of Leicester |
| 6:20 pm | Q and A/Discussion                                                           |                                               |
| 6:30 pm – 7:30 pm | Moderated Poster Session 1/Wine and Cheese Reception | Moderators: Scott Flamm, MD, Cleveland Clinic
Warren Manning, MD, Beth Israel Deaconess Medical Center |
| 6:37 pm | M1 PET-MRI Tracking of Imaging-Visible Microencapsulated Stem Cells in Immunocompetent Rabbits | Yingli Fu, PhD, Johns Hopkins Medicine |
Scientific Sessions

Saturday, February 2, 2013

6:45 am – 8:00 am Continental Breakfast /Posters/Exhibits Grand Ballroom B

7:00 am – 8:00 am Physics for Physicians 2 Imperial Ballroom A
Moderators: Sonia Nielles-Vallespin, PhD, NIH
Mark Griswold, PhD, Case Western Reserve University

7:00 am Hardware: RF Coils
Mark Griswold, PhD, Case Western Reserve University

7:15 am Parallel Imaging
Nicole Seiberlich, PhD, Case Western Reserve University

7:30 am Other Techniques
Michael Lustig, PhD, University of Berkeley

7:45 am Q and A/Discussion

7:00 am – 8:00 am Cardiology for Non-cardiologists 2 Imperial Ballroom B
Moderators: Florian von Knobelsdorff, MD, Charité Medical University
Mark Westwood, MD, The London Chest Hospital

7:00 am The Heart as a Pump: Understand Ventricular Mechanics
Marcus Carlsson, MD, Lund University Hospital

7:20 am Aortic Stenosis and Regurgitation: The Lesion and Resulting Problems
Florian von Knobelsdorff, MD, Charité Medical University

7:40 am Case Presentation: CMR Case of Combined Aortic Stenosis/Aortic Regurgitation
Henning Steen, MD, Universitatsklinikum Heidelberg

7:50 am Q and A/Discussion

7:00 am - 8:00 am Case Review Session 6 - Yosemite A-B Fascinating Vascular Disease Cases
Moderators: David Bluemke, MD, PhD, NIH
Uma Valeti, MD, University of Minnesota

Type A Aortic Dissection Masquerading as a Right Atrial Mass
Lucien Abboud, MD, St. Francis Hospital

The Entrapped Popliteal Artery: Role of MRI in Diagnosis
Gurpreet Gulati, MD, All India Institute of Medical Sciences

8:00 am – 9:30 am Concurrent Sessions

8:00 am Invited Lecture Session 5 – Grand Ballroom A
NIHD: Inflammation and Myocardial Involvement in Systemic Disorder – Offer Our Technology to Other Specialties
Moderators: Peter Buser, MD, University Hospital Basel
Subha Raman, MD, The Ohio State University

Upon completion of this educational activity, the participant should be better able to:
• Gain an understanding of techniques for regional myocardial mechanics assessment in nonischemic cardiomyopathies
• Recognize CMR findings of various causes of left ventricular hypertrophy
• Explain the myocardial and vascular abnormalities in rheumatologic and vascilitic disorders

8:00 am Functional CMR for the Assessment of Regional Myocardial Tissue Mechanics in Non-ischemic Heart Disease
Michael Markl, PhD, Northwestern University

8:20 am Left Ventricular Hypertrophy – Differentiation of the Underlying Cause – Only Amyloidosis?
Alicia Maciera, MD, ERESA Grupo Medico

8:40 am Rheumatologic Disorders – Myocardial Injury in Preserved Ejection Fraction
Amit Patel, MD, University of Chicago

9:00 am Large Vessel Vasculitis – Lumen and Vessel Wall
Sophie Mavrogeni, MD, RCI Hellas SA

9:20 am Q and A/Discussion

Giant Bypass Aneurysm: One Cause of Suspected Cardiac Mass
Christina Unterberg-Buchwald, MD, University Clinic Goettingen

An Interesting Cause of Chronic Liver Failure
Juan Lopez-Mattei, MD, Methodist DeBakey Heart & Vascular Center

Acute chest pain in a 50 year-old man with Marfan’s syndrome and prior aortic root replacement
Stefan Zimmerman, MD, Johns Hopkins Medicine

Q and A/Discussion
8:00 am | Case Review Session 7 - Yosemite A-B
Best Cases from the SCMR Website
Moderators: Chiara Bucchiarelli Ducci, MD, Bristol Heart Institute
Robert Rollings, MD, Savannah Cardiology

**Case 1 - Post Pericardiectomy for Constriction – Late Complication**
Robert Huggett, PhD, Russells Hall Hospital

**Case 2 - A Severe Ductal Aneurysm in a Neonate**
Jonathan Windram, BSc(Hons), MBChB, The Hospital for Sick Children

**Case 3 - A Pseudo-Alfieri Aortic Valve Masquerading as Severe Aortic Stenosis**
Kapildeo Lotun, MD, University of Arizona

**Case 4 - Echo and CMR in Acromegalic Cardiomyopathy**
Raymond Chan, MD, Sir Mortimer B. Davis Jewish General Hospital

**Case 5 - Branch Pulmonary Artery Flow Curves in Repaired Tetralogy of Fallot**
Sylvia Chen, PhD, Flinders Medical Centre

8:08 am | O 49 Quantification of Myocardial Scar Assessed by Late Gadolinium Enhancement CMR in the Multi-Ethnic Study of Atherosclerosis: Comparisons of 7 Different Methods
Patricia Rizzi, MD, John Hopkins University

8:20 am | O 50 Improved Left Atrial Imaging in Atrial Fibrillation Patients Using Novel ECG-gated vs. Conventional Non-gated Cardiac MRA
Douglas Sheller, MD, University of Utah

8:32 am | O 51 Left Ventricular Function, Aortic Velocity, and Late Gadolinium Enhancement Assessed by Real-time and Single Shot CMR is Comparable to Breath-held Segmented Imaging: A Prospective Study
Ashish Aneja, MD, The Ohio State University

8:44 am | O 52 Robust and Fast SSFP for the Evaluation of LV Function at 3T
Yin Wu, PhD, Shenzhen Institutes of Advanced Technology

8:56 am | O 53 Cardiac Magnetic Resonance Perfusion Imaging and the Effects of Single Intravenous Cannulation with the Octopus Bionector
Heiko Kindler, MRCP, Royal Brompton Hospital

9:08 am | O 54 Fully Automatic Planning of the Long-axis Views of the Heart
Carmel Hayes, PhD, Siemens AG

9:20 am | Q and A/Discussion

8:00 am | Oral Abstract Session 10 - Imperial Ballroom B
Vascular MRI: Flow, Angiography, and Tissue Perfusion
Moderators: Jens Bremerich, MD, University Hospital Basel
Florian von Knobelsdorff, MD, Charité Medical University

8:08 am | O 55 High Acceleration Quiescent-interval Single Shot Magnetic Resonance Angiography at 3T in Patients with Peripheral Artery Disease
Parag Amin, MD, Northwestern Memorial Hospital

8:20 am | O 56 Using MRI Derived Patient-Specific Flow Models and Flow Imaging for Flow Diverting Stent Rehearsal
Gabriel Acevedo-Bolton, PhD, University of California-San Francisco

8:32 am | O 57 Body-coil Non-enhanced MR Angiography using Highly Undersampled Radial QISS
Robert Edelman, MD, NorthShore University Health System

8:44 am | O 58 MR-based Calf Muscle Perfusion Index Correlates with Treadmill Exercise Test Parameters in Patients with Peripheral Arterial Disease
Stephanie Clement-Guinaudeau, MD, Emory University

8:56 am | O 59 Difference between Cerebral Embolic Events following Transcathether Aortic Valve Implantation (TAVI) and Surgical Aortic Valve Replacement (SAVR): A Diffusion Weighted MRI Study
Akhlape Uddin, MBChB, Multidisciplinary Cardiovascular Research Centre (MCRC) & Leeds Institute of Genetics, Health and Therapeutics
Scientific Sessions

9:08 am O 60 Simultaneous Static and Time-resolved Non-enhanced Peripheral MR Angiography
Ioannis Koktzoglou, PhD, NorthShore University Health System

9:20 am Q and A/Discussion

9:30 am – 10:00 am Morning Break /Posters/Exhibits

10:00 am – 11:30 am Concurrent Sessions

10:00 am Invited Lecture Session 6 – Grand Ballroom A Cardiac T1 Mapping: Methods and Applications
Moderators: Peter Kellman, PhD, NHLBI
Daniel Messroghli, MD, Deutsches Herzzentrum Berlin

Upon completion of this educational activity, the participant should be better able to:
• Explain the differences between T1-weighted imaging and T1 mapping
• Describe how extracellular volume (ECV) is related to myocardial fibrosis, and how ECV can be assessed
• Name at least two major applications for T1 mapping/ECV mapping

10:00 am T1 Mapping in the Heart
Peter Kellman, PhD, NHLBI

10:20 am Post-processing: From T1 to ECV
Martin Ugander, MD, PhD, Karolinska Institute

10:40 am Clinical Applications of Native T1 Mapping
Erica Dall’Armellina, MD, University of Oxford

11:00 am Clinical Applications of Contrast-enhanced T1/ECV Mapping
Andrew Flett, MBBS, BSc, The Heart Hospital London

11:20 am Q and A/Discussion

10:00 am Invited Lecture Session 7 – Yosemite A-B Advanced Acceleration Techniques: Faster IS Better
Moderators: Frederick Epstein, PhD, University of Virginia
Orlando Simonetti, PhD, The Ohio State University

Upon completion of this educational activity, the participant should be better able to:
• Recognize and recall four technologies used to accelerate CMR data acquisition
• Summarize the tradeoffs associated with different acceleration techniques
• Understand the future potential for emerging acceleration techniques

10:00 am Parallel Imaging: Have We Reached the Limits?
Mark Griswold, PhD, Case Western Research University

10:20 am Using Spatio-temporal Correlation to Accelerate CMR
Sebastian Kozerke, PhD, ETH Zurich

10:40 am Radial Sampling: Trajectory to the Future?
Sonia Nielles-Vallespin, PhD, NIH

11:00 am Compressed Sensing: What Can It Do for CMR?
Michael Lustig, PhD, University of Berkeley

11:20 am Q and A/Discussion

10:00 am Invited Lecture Session 8 – Imperial Ballroom B CMR Useful to Differentiate the Acute Coronary Syndrome
Moderators: Holger Thiele, MD, University of Leipzig
Joao Lima, MD, Johns Hopkins University

Upon completion of this educational activity, the participant should be better able to:
• Recognize the different CMR patterns in acute coronary syndromes
• Recognize the prognostic value of microvascular obstruction, infarct size and intramyocardial hemorrhage
• Differentiate CMR acute coronary syndromes patterns from myocarditis, Takotsubo-cardiomyopathy and other acute coronary syndromes with normal coronary arteries
• Utilize CMR for ruling out acute coronary syndromes in the emergency department

10:00 am CMR Patterns and Prognosticators in STEMI, NSTEMI and Unstable Angina
Holger Thiele, MD, University of Leipzig

10:20 am CMR to Guide Acute Chest Pain in the Emergency Department
Ricardo Cury, MD, Baptist Cardiac and Vascular Institute

10:40 am CMR for Differential Diagnosis - Myocarditis and Other Entities
Jeanette Schulz-Menger, MD, Charité Medical University and HELIOS

11:00 am Myocardial at Risk - Lessons from Cardiac MRI
Hakan Arheden, MD, PhD, Lund University

11:20 am Q and A/Discussion

10:00 am Oral Abstract Session 11 - Imperial Ballroom A Basic Translational - Pre-clinical: From PET-MRI to Nanoparticles
Moderators: David Sosnovik, MD, Massachusetts General Hospital
Joachim Lotz, MD, University Medical Center Gottingen

10:00 am Introductory Presentation
David Sosnovik, MD, Massachusetts General Hospital

10:08 am O 61 Feasibility of MRI Attenuation Correction in Cardiac FDG-PET
Jeffrey Lau, MD, PhD, Washington University in St. Louis

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter/Institution</th>
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<tbody>
<tr>
<td>10:20 am</td>
<td>O 62 Chronic Obstructive Pulmonary Disease (COPD) is Associated with Pulmonary Artery Stiffness – The MESA COPD Study</td>
<td>Chia-Ying Liu, PhD, Johns Hopkins University</td>
</tr>
<tr>
<td>10:32 am</td>
<td>O 63 Efficient 3D Late Gadolinium Enhancement Imaging using the CLAWS Respiratory Motion Control Algorithm</td>
<td>Jennifer Keegan, PhD, Royal Brompton Hospital</td>
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<tr>
<td>10:44 am</td>
<td>O 64 Retrospectively Gated Intra-cardiac 4D Flow CMR using Spiral K-Space Trajectories</td>
<td>Sven Petersson, M.Sc., Linköping University</td>
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<tr>
<td>10:56 am</td>
<td>O 65 Vortex Formation Ratio in Heart Failure Compared to Healthy Volunteers at Rest and During Exercise</td>
<td>Mikael Kanski, MD, Lund University</td>
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<tr>
<td>11:08 am</td>
<td>O 66 High-Gd-Payload P22 Protein Cage Nanoparticles for Imaging Vascular Inflammation</td>
<td>Hisanori Kosuge, MD, PhD, Stanford University</td>
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<td>11:20 am</td>
<td>Q and A/Discussion</td>
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<tr>
<td>11:30 am – 12:30 pm</td>
<td>Moderated Poster Session 2</td>
<td>Moderators: Peter Buser, MD, University Hospital Basel Gerald Pohost, MD, University of Southern California</td>
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<tr>
<td>11:30 am</td>
<td>M 8 4D Flow MRI Demonstrates Altered Aortic Hemodynamics in Patients with Right- Left and Right-Non-coronary Bicuspid Aortic Valve Fusion Patterns</td>
<td>Riti Mahadeva, BA, Northwestern University</td>
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<tr>
<td>11:44 am</td>
<td>M 9 Potency of Integrating Three-dimensional Cardiac Magnetic Resonance Imaging into Electroanatomic Mapping to Perform Catheter Ablation in Pediatrics</td>
<td>Satoshi Kunimoto, MD, Niho University School of Medicine</td>
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<tr>
<td>11:51 am</td>
<td>M 10 MR-Guided Cardiac Radiofrequency Ablation with Catheter-Tracking Local MR Lesion Monitoring</td>
<td>Tobias Schaeffter, PhD, King's College London</td>
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<td>11:58 am</td>
<td>M 11 Assessment of Cardiac Dyssynchrony: A Comparison of Velocity Encoded Imaging and Feature Tracking Analysis</td>
<td>Daniel Kuetting, University of Bonn</td>
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<tr>
<td>12:05 pm</td>
<td>M 12 Detection of Myocardial Inflammation in Chagas’ Disease by Cardiac Magnetic Resonance</td>
<td>Jorge Torreão, MD, University of São Paulo Medical School</td>
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<td>12:12 pm</td>
<td>M 13 Spatial Heterogeneity of Intracardiac 4D Relative Pressure Fields during Diastole</td>
<td>Jonatan Eriksson, MSc, Linköping University</td>
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<tr>
<td>12:19 pm</td>
<td>M 14 Evolution of Aortic Wall Thickness: Long-term Follow Up from the Multi-Ethnic Study of Atherosclerosis (MESA)</td>
<td>Chia-Ying Liu, PhD, Johns Hopkins University</td>
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<td>12:30 pm – 2:00 pm</td>
<td>Concurrent Sessions</td>
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<tr>
<td>12:30 pm</td>
<td>Invited Lecture Session 9 – Grand Ballroom A CMR in Adults with Congenital Cardiac Disease</td>
<td>Reza Razavi, MD, King's College London Craig Broberg, MD, Oregon Health &amp; Sciences University</td>
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<td>12:30 pm</td>
<td>Aortic Coarctation in the Adult – New Light on an Old Problem</td>
<td>Gerald Greil, MD, King’s College London</td>
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<td>12:45 pm</td>
<td>Fibrosis and Scar Imaging in ACCD - Important or Innocent?</td>
<td>Sonya Babu-Narayan, MB, PhD, Royal Brompton Hospital</td>
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<td>1:00 pm</td>
<td>Cutting Edge CMR in Adult Fontan Patients - New Insights, New Tools</td>
<td>Andrew Taylor, MD, UCL Institute of Cardiovascular Science</td>
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<td>1:15 pm</td>
<td>Risk Stratification in Aortic Root Dilatation - Beyond Diameters?</td>
<td>Albert de Roos, MD, PhD, Leiden University Medical Center</td>
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<td>1:30 pm</td>
<td>The Fate of the Systemic RV After Atrial Switch</td>
<td>Tal Geva, MD, Children's Hospital Boston</td>
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<td>1:45 pm</td>
<td>Q and A/Discussion</td>
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Scientific Sessions

12:30 pm  Case Review Session 8 - When Yosemite A-B
CMR Complements Other Modalities
Moderators: Marcus Chen, MD, NIH
Pamela Woodard, MD, Mallinckrodt Institute of Radiology

CMR Complements Structural Imaging for a Functional Assessment in ACS
Elisa McAlindon, BMBS(Hons), MRCP, Bristol Heart Hospital

Chronic Intramyocardial Hematoma from a Contained Post-traumatic Myocardial Rupture
Gregory King, MD, Sunnybrook Health Sciences Centre

Cardiac Magnetic Resonance Findings of an Actively Rupturing Myocardial Pseudoaneurysm
Michael Hall, MD, Wake Forest School of Medicine

Successful Resuscitation in a Patient with Primary Cardiac Mass
Christina Unterberg-Buchwald, MD, University Clinic

Implications of CMR Identification of Anomalous Papillary Muscle Insertion into the Mitral Valve in Hypertrophic Cardiomyopathy
Ethan Rowin, MD, Tufts Medical Center

A Huge Right Ventricle: Role of Cardiac Magnetic Resonance (CMR) in the Diagnosis
Gurpreet Gulati, MD, All India Institute of Medical Sciences

Left Ventricular Accessory Chamber: A Difficult Diagnosis in a Newborn with Heart Failure. Evaluation by CMR and Gated-cardiac CT
Martha Carrillo, MD, Instituto Nacional de Cardiologia

12:30 pm  Oral Abstract Session 12 - Imperial Ballroom A
Early Career Award - Clinical
Moderators: Victor Ferrari, MD, University of Pennsylvania
Albert de Roos, MD, PhD, Leiden University Medical Center

12:30 pm  O 67  Late Gadolinium Enhancement Cardiovascular Magnetic Resonance for Sudden Cardiac Death Risk Stratification in Hypertrophic Cardiomyopathy
Tevfik Ismail, BSc(Hons), MB BS, MRCP, Royal Brompton Hospital

12:45 pm  O 68  Patients with Dilated Cardiomyopathy (DCM) Have Appropriate Myocardial Oxygenation Response to Vasodilator Stress
Sairia Dass, MBBS, The John Radcliffe Hospital

1:00 pm  O 69  Cusp Fusion Pattern in Bicuspid Aortic Valve Disease Predicts Severity of Aortic Flow Abnormalities
Malenka Bissell, MD, University of Oxford

1:15 pm  O 70  New ‘Gold Standard’ for Assessing Myocardial Oedema in STEMI?
Elisa McAlindon, BMBS(Hons), MRCP, Bristol Heart Hospital

1:30 pm  O 71  Native T1 Lowering in Iron Overload and Andrew Fabry Disease; A Novel and Early Marker of Disease
Daniel Sado, BSc, The Heart Hospital

1:45 pm  O 72  Diffuse Myocardial Fibrosis in Pediatric Hypertrophic Cardiomyopathy
Tarique Hussain, MBBChir, Birmingham Children's Hospital

12:30 pm  Oral Abstract Session 13 - Imperial Ballroom B
CAD: Infarct Age, Size, Heterogeneity, Symptoms and Effect on Atrial Volumes
Moderators: Ingo Eitel, MD, University of Leipzig
Thomas Elgeti, MD, Charité Medical University

12:30 pm  Introductory Presentation
Ingo Eitel, MD, University of Leipzig

12:38 pm  O 73  A Simple Visual Algorithm Incorporating the Components of a Routine CMR Study Improves the Determination of Infarct Age Compared with T2-CMR Alone
Martijn Smulders, MD, Maastricht University Medical Center

12:50 pm  O 74  Microvascular Obstruction is Associated with Greater Infarct Heterogeneity
Idan Roifman, MD, Sunnybrook Health Sciences Centre

1:02 pm  O 75  Prognostic Utility of Late Gadolinium Enhancement Cardiac Magnetic Resonance Imaging in Coronary Artery Disease: A Meta-Analysis
Raymond Chan, MD, Beth Israel Deaconess Medical Center

1:14 pm  O 76  Relationship between Obesity and Unrecognized Myocardial Infarction: A EuroCMR Multi-Center Study
Christoph Jensen, MD, Duke University

1:26 pm  O 77  Larger Infarct Size Associated with Dysglycemia at the Time of ST-elevation Myocardial Infarction Is Related to Later Presentation
Naveed Razvi, MBBS BSc, University of Leicester
1:38 pm  Q 78  Left Atrial Volume during the Early Convalescent Phase of Acute MI Is Strongly Related to Expansion of Myocardial Extracellular Matrix during Infarct Healing and Ventricular Remodeling
Siddique Abbasi, MD, Brigham and Women’s Hospital

1:50 pm  Q and A/Discussion

2:00 pm – 2:30 pm  Afternoon Break/Grand Ballroom B

2:30 pm – 4:00 pm  Concurrent Sessions

2:30 pm  Invited Lecture Session 10 – Grand Ballroom A
Advanced Pediatric Cardiac CMR in 2013 – Pushing the Envelope
Moderators: Lars Grosse-Wortmann, MD, Hospital for Sick Children
Willem Helbling, MD, Erasmus Medical Center
Upon completion of this educational activity, the participant should be better able to:
• Recognize advantages and disadvantages of new functional CMR developments in pediatric populations
• Discuss the technical requirements for new functional CMR applications in pediatric populations

2:30 pm  Fetomaternal Circulation by CMR
Ulrike Wedegartner, MBBS, University Medical Center Hamburg-Eppendorf

2:45 pm  Functional CMR in the Newborn Infant
Alan Groves, MD, Imperial College London

3:00 pm  4D Flow – What Is It Good for in Congenital Heart Disease
Tino Ebbers, PhD, Linkoping University

3:15 pm  Ventricular Interaction and Regional Wall Motion Assessment by CMR
Mark Fogel, MD, Children’s Hospital of Philadelphia

3:30 pm  First-pass Pulmonary Perfusion in Pediatric Cardiovascular Disease
Rajesh Krishnamurthy, MD, Texas Children’s Hospital

3:45 pm  Q and A/Discussion

2:30 pm  Oral Abstract Session 14 - Imperial Ballroom A
Basic Translational - Post-processing: Function, Perfusion, Hemodynamics and Angiogenesis
Moderators: Frederick Epstein, PhD, University of Virginia
Erik Schelbert, MD, University of Pittsburgh

2:30 pm  Introductory Presentation
Frederick Epstein, PhD, University of Virginia

2:38 pm  O 79  From Unicuspid to Quadricuspid: The Impact of Aortic Valve Morphology on 3D Hemodynamics
Pegah Entezari, MD, Northwestern University

2:50 pm  O 80  Pressure Overloaded Right Ventriles: Importance of Trabeculae in Evaluation of RV Function by CMR
Mieke Driessen, MD, University Medical Center Utrecht

3:02 pm  O 81  Improving the Accuracy of Multi Breath-hold Diffusion Tensor MRI Tractography of the Heart Using Dynamic Motion Correction
Choukri Mekkaoui, PhD, Harvard Medical School
3:14 pm  O 82  Diastolic Function from Tagged MRI and Myocardial Fibrosis: The Multi-Ethnic Study of Atherosclerosis (MESA)
Bharath Ambale Venkatesh, PhD, Johns Hopkins University

3:26 pm  O 83  Quantitative Molecular Imaging of Angiogenesis-targeted Fluorinated Nanoparticles: New Approaches for B1-Mapping Compensation for 19F-MRI
Matthew Goette, MS, Washington University in St. Louis

3:38 pm  O 84  The Relationship Between Spatial Resolution Levels and Quantitative Myocardial Perfusion
Niloufar Zarinabad, PhD, King’s College London

3:50 pm  Q and A/Discussion

2:30 pm  Oral Abstract Session 15 - Imperial Ballroom B
Procedure-planning, Monitoring and Outcome in Electrophysiology
Moderators: Gerald Pohost, MD, University of Southern California
Holger Thiele, MD, PhD, Lund University

2:30 pm  Introductory Presentation
Holger Thiele, MD, PhD, Lund University

2:38 pm  O 85  Multiparametric CMR Assessment of RV Apical versus Septal Pacing Study (MAPS) – Preliminary Acute Hemodynamic Findings
Mark Ainslie, MBChB (hons) Bsc (hons), University of South Manchester

2:50 pm  O 86  Impact of Cardiac Magnetic Resonance (CMR) on Utilization of Implantable-Cardioverter-Defibrillators (ICD) for Primary Prophylaxis of Sudden Cardiac Death
Andrew Ertel, MD, University of Illinois at Chicago

3:02 pm  O 87  Exploring Intrinsic MR Signal Relaxation in Acute RF Ablation Lesions Using T2 Mapping and IR-SSFP CINE Imaging
Venkat Ramanan, MBBS, M.Tech, Sunnybrook Research Institute

3:14 pm  O 88  Voltage-based Electroanatomic Mapping System for MR-guided Cardiac Electrophysiology: Preliminary Swine Validations
Zion Tse, PhD, University of Georgia

3:26 pm  O 89  Dual-HR Late Gadolinium Enhancement Achieves Better Blood Suppression than Traditional IR in a Swine Model of Atrial Radiofrequency Ablation Scar
Sarah Peel, PhD, King’s College London

3:38 pm  O 90  DE-MRI Allows Comparison of Lesion Formation after Pulmonary Vein Isolation with Different Ablation Catheters in Patients with Paroxysmal Atrial Fibrillation
Christian Mahnkopf, MD, University of Utah

3:50 pm  Q and A/Discussion

4:00 pm – 5:30 pm  Concurrent Sessions

4:00 pm  Invited Lecture Session 11 – Grand Ballroom A
High Throughput/CMR in Clinical Practice-Impact of Protocols
Moderators: Edward Martin, MD, Oklahoma Heart Institute
Joseph Selvanayagam, MD, Flinders Medical Center

Upon completion of this educational activity, the participant should be better able to:
• Recognize the ‘tricks and tips’ to scan very sick patients
• Discuss the usefulness and limitations of high throughput techniques
• Explain the changes in practice after the 2008 guidelines

4:00 pm  The Usefulness of Disease Specific Protocols
Scott Flamm, MD, MBA, Cleveland Clinic

4:20 pm  Changes in Practice after 2008 Guidelines
Eike Nagel, MD, PhD, King’s College London

4:40 pm  Optimizing CMR Studies in Very Sick Patients
Victor Ferrari, MD, University of Pennsylvania

5:00 pm  What are the New High Throughput Techniques We Can Use Clinically and Their Limitations
Matthias Stuber, MD, Lausanne University

5:20 pm  Q and A/Discussion

4:00 pm  Invited Lecture Session 12 – Yosemite A-B
Wide Spectrum of Flow-Assessment Beyond Routine: From Computational Modeling to 4D
Moderators: Anthony Faranesh, PhD, NHLBI
Florian von Knobelsdorff, MD, Charité Medical University

Upon completion of this educational activity, the participant should be better able to:
• Recognize the interaction of cardiac function and blood flow
• Explain the technique, application, potential and limitation of 2D- and 4D-phase contrast flow measurements
• Comprehend the principle and potential of combining conventional in-vivo MR imaging with computational fluid dynamics for improved personalized treatment strategies
4:00 pm  Introduction into Cardiac Fluid Mechanics  
Partho Sengupta, MD, Zena and Michael A. Wiener Cardiovascular Institute

4:20 pm  2D Phase Contrast MRI: State-of-the-Art and Emerging Applications  
Kevin Johnson, PhD, University of Wisconsin - Madison

4:40 pm  4D-PC-MRI for Cardiovascular Flow: Applications, Novel Results and Future Perspectives  
Michael Hope, MD, University of California - San Francisco

5:00 pm  Combining Computational Fluid Dynamics and MRI: New Strategy to Understand Cardiovascular Diseases and Treatment Planning?  
Charles Taylor, PhD, HeartFlow

5:20 pm  Q and A/Discussion

4:00 pm  Oral Abstract Session 16 - Imperial Ballroom A  
Risk Stratification in Ischemic and Non-ischemic Cardiomyopathies: From Flow-reserve to Contrast-enhancement  
Moderators: Raymond Kwong, MD, MPH, Brigham and Women's Hospital  
Carlos Rochitte, MD, Heart Institute - InCor

4:00 pm  Introductory Presentation  
Raymond Kwong, MD, MPH, Brigham and Women's Hospital

4:08 pm  O 91  Impaired Coronary Flow Reserve Determined by MR Measurement of Coronary Sinus Flow Predicts Adverse Outcome in Patients with Known or Suspected Coronary Artery Disease  
Masaki Ishida, MD, PhD, Mie University

4:20 pm  O 92  Interstitial Expansion in Pressure Overload Left Ventricular Hypertrophy  
Thomas Treibel, MBBS, University College London

4:32 pm  O 93  Impact of CMR Parameters on Clinical Outcome after STEMI: Data from a Large Multi-Center Study  
Suzanne de Waha, MD, University of Leipzig

4:44 pm  O 94  The Breast Cancer, Early Disease: Toxicity from Therapy with Epirubicin Regimens – Cardiac Assessment and Risk Evaluation (BETTER-CARE) Study: CMR with Early Gadolinium Relative Enhancement, but Not High-Sensitivity Troponin T, Predicts the Risk of Chronic Anthracycline Cardiotoxicity  
Paul Kotwinski, MD, Royal Brompton Hospital

4:56 pm  O 95  The Detection of Left Ventricular Scar by Delayed Enhancement-CMR in Non-ischemic Cardiomyopathy Is a Stronger Predictor of Cardiovascular Events than Left Ventricular Ejection Fraction  
Carlos Orrego, MD, Weill Cornell Medical College

5:08 pm  O 96  European Cardiovascular Magnetic Resonance (EuroCMR) Registry – Multi National Results from 57 Centers in 15 Countries  
Anja Wagner, MD, Comprehensive Cardiology

5:20 pm  Q and A/Discussion

4:00 pm  Oral Abstract Session 17 - Imperial Ballroom B  
Imaging of Structure in Congenital Heart Disease  
Moderators: Tal Geva, MD, Children's Hospital Boston  
Andrew Crean, MD, Toronto General Hospital

4:00 pm  Introductory Presentation  
Tal Geva, MD, Children's Hospital Boston

4:08 pm  O 97  Clinical Significance of Late Gadolinium Enhancement in Pediatric Patients with HypertrophicCardiomyopathy  
Brandon Smith, MD, University of Michigan

4:20 pm  O 98  Clinical Validation of Free Breathing Respiratory Triggered Retrospectively Cardiac Gated Cine Steady-state Free Precession (RT-SSFP) Imaging in Sedated Children  
Rajesh Krishnamurthy, MD, Texas Children's Hospital

4:32 pm  O 99  Myocardial Fibrosis and Ventricular Strain Indices in Post-Fontan Single Ventricle Patients: Cardiac MR Assessment and Prognostic Significance  
Sanmit Basu, MD, MS, St. Louis Children’s Hospital

4:44 pm  O100 Right Ventricle Anatomy Can Predict New Onset Ventricular Tachycardia in Patients with Repaired Tetralogy of Fallot  
Beatrice Bonello, MD, Royal Brompton Hospital

4:56 pm  O101  Aortic Root and Ascending Aortic Dilatation in Patients with Repaired Tetralogy of Fallot. Determinants, Rates of Progression, Impacts on Outcomes and Relations to Branch Pulmonary Artery Stenosis  
Beatrice Bonello, MD, Royal Brompton Hospital
5:08 pm  O102  Comparative Assessment of Pediatric Right Ventricular Volumes and Function by MRI: Right Horizontal Long Axis versus Short Axis
Brian Soriano, MD, Seattle Children's Hospital

5:20 pm  Q and A/Discussion

5:30 pm – 6:00 pm  CMR Technology Updates  Grand Ballroom A

6:00 pm – 6:30 pm  Award Presentations  Grand Ballroom A

6:30 pm – 8:00 pm  Award Reception  Golden Gate Room

Sunday, February 3, 2013

6:45 am – 8:00 am  Continental Breakfast

7:00 am – 8:00 am  Physics for Physicians 3  Imperial Ballroom A
Moderators: Sonia Nielles-Vallespin, PhD, NIH
Reza Nezafat, PhD, Beth Israel Deaconess Medical Center

7:00 am  Hardware: Physiological Monitoring (ECG, Respiratory Belts, Acoustic Systems, Ultrasound, Etc.)
Thorall Niendorf, PhD, Max-Delbrueck Center for Molecular Medicine

7:15 am  Cardiac Motion
Orlando Simonetti, PhD, The Ohio State University

7:30 am  Respiratory Motion
Jennifer Keegan, PhD, Royal Brompton Hospital

7:45 am  Q and A/Discussion

7:00 AM – 8:00 AM  Cardiology for Non-cardiologists 3  Imperial Ballroom B
Moderators: Karen Ordovas, MD, University of California - San Francisco
Joseph Selvanayagam, MBBS, DPhil, Flinders Medical Centre

7:00 am  Cardiomyopathies: Classification and Clinical Profiles
Steffen Petersen, MD, DPhil, Barts and The London

7:20 am  Heart Rhythm Disorders: Atrial Fibrillation and Ventricular Ectopia
Ingo Eitel, MD, University of Leipzig

7:40 am  Case Presentation: CMR Assessment in Non-ischemic Cardiomyopathy
Karen Ordovas, MD, University of California-San Francisco

7:50 am  Q and A/Discussion

8:00 AM – 9:30 AM  Concurrent Sessions

8:00 am  Invited Lecture Session 13 – Grand Ballroom A
Post-processing Methods: Pro and Con for Quantification
Moderators: Hakan Arheden, MD, PhD, Lund University
Leon Axel, MD, PhD, NYU Langone Medical Center
Upon completion of this educational activity, the participant should be better able to:
• Understand the clinical impact of CMR quantification
• Explain the technical aspects of quantitative cardiac function assessment with CMR
• Explain the anatomic and physiologic aspects of quantitative cardiac function assessment with CMR
• Describe the technical aspects of quantitative analysis of early and late contrast enhancement in CMR

8:00 am  Do We Really Need Quantification in CMR?
Matthias Friedrich, MD, CMR Centre at the Montreal Heart Institute

8:20 am  CMR Post-processing Techniques for Assessment of Ventricular Function. State of the Art in Automated Techniques for Research and Clinical Application
Rob van der Geest, PhD, Leiden University Medical Center

8:40 am  Automated Processing of Myocardial Perfusion and Late Enhancement MR
Hsu Li-Yueh, PhD, NIH

9:00 am  CMR Derived Three Dimensional Modeling of Cardiac Anatomy and Function in Normal Subjects and Cardiac Pathologies
Alistair Young, PhD, University of Auckland

9:20 am  Q and A/Discussion

8:00 am  Invited Lecture Session 14 – Imperial Ballroom A
Emerging Technology CMR and Beyond
Moderators: Daniel Ennis, PhD, University of California-Los Angeles
Harald Quick, PhD, Institute of Medical Physics
Upon completion of this educational activity, the participant should be better able to:
• Recognize and recall four emerging CMR technologies
• Summarize the rationale and potential applications for each of them
• Critique their advantages and disadvantages

8:00 am  Multi-coil RF Transmit Systems
Lukas Winter, M.Eng., Dpl.-Ing, Max-Delbrueck Center for Molecular Medicine

8:20 am  Interventional MRI: Journey to the Clinic
Anthony Faranesh, PhD, NHLBI
Scientific Sessions

8:00 am  Oral Abstract Session 18 - 8:08 am  O103  Multicenter Evaluation of Dynamic
Imperial Ballroom B  Three-dimensional Whole-heart Myocardial
Ischemia and Viability: Ischemic Burden,  Perfusion Imaging for the Detection of
Reperfusion Injury, Fractional Flow Reserve, Coronary Artery Disease Defined by
and Manganese Enhanced Stem Cell Imaging  Fractional Flow Reserve
Moderators: Anthony Aletras, PhD, University of
Central Greece
John Greenwood, MBChB, PhD, University of Leeds

8:00 am  Introductory Presentation
John Greenwood, MBChB, PhD, University of Leeds

8:08 am  O103  Multicenter Evaluation of Dynamic
Three-dimensional Whole-heart Myocardial
Perfusion Imaging for the Detection of
Coronary Artery Disease Defined by
Fractional Flow Reserve
Robert Manka, MD, University Hospital Zurich

8:20 am  O104  Contribution of Reperfusion
Hemorrhage to T2 and T2* CMR in the
Quantification of Hemorrhage Extent
and Area-at-risk after Acute
Myocardial Infarction
Nilesh Ghugre, PhD, Sunnybrook Research Institute

8:32 am  O105  The Ischaemic and Scar Burden
Measured by Cardiac Magnetic Resonance
Imaging in Patients with Ischaemic
Coronary Heart Disease from the
CE-MARC Study
Sven Plein, MD, PhD, University of Leeds

8:44 am  O106  Manganese-enhanced Cardiac MRI
(MEMRI) Tracks Long-term In Vivo Survival
and Restorative Benefit of Transplanted
Human Amnion-Derived Mesenchymal
Stem Cells (hAMSC) after Porcine
Ischemia-Reperfusion Injury
Rajesh Dash, MD, PhD, Stanford University

9:08 am  O108  The Assessment of Ischaemic
Burden: Validation of a “Functional”
Jeopardy Score against Cardiovascular
Magnetic Resonance
Shazia Hussain, MbChB, King's College London

9:30 am – 10:00 am  Morning Break

8:40 am  Compressed Sensing in the Clinic
Reza Nezafat, PhD, Beth Israel Deaconess
Medical Center

9:00 am  Diffusion Imaging in the Heart
Pierre Croisille, MD, PhD, Université J. Monnet

9:20 am  Q and A/Discussion

8:00 am  Case Review Session 10 - Congenital Yosemite A-B
Modemators: Sohrab Fratz, MD, PhD, Deutsches
Herzzentrum Münhen
Andrew Taylor, MD, UCL Institute of Cardiovascular Science

Unexpected CMR Finding of Dual Sources of
Pulmonary Blood Flow After Tetralogy of Fallot Repair: Implications for Management
Rukmini Komarlu, MD, Boston Children's Hospital

A Unique Case of Cardiac Herniation with
Complex Cardiac Anatomy and Physiology -
CMR to the Rescue [An Example of Complex
Conditions Seen in a Developing Country]
Mahesh Kappanayil, MD, Amrita Institute of Medical Sciences
and Research Centre

Why So Blue?
Vikram Raju, Toronto General Hospital

Comprehensive Evaluation of a Patient with
Kawasaki Disease and Giant Coronary
Aneurysms with Cardiac Magnetic Resonance
Milan Prsa, MD, The Hospital for Sick Children

Asymptomatic Isolated Hypoplastic Left
Ventricular Apex Syndrome
Thomas Treibel, MBBS, University College London

Large Hepatic Vein to Pulmonary Vein
Connection as Source of Desaturation In
a Complex Fontan Patient Shown by
Cardiac MRI
Shafkat Anwar, MD, Children’s Hospital of Philadelphia

Does Abnormal Systemic Venous Drainage Help
Compensate for Severe Heart Failure in the
Presence of a Vein of Galen Malformation?
Adrian Dyer, MD, University of Texas Southwestern
Medical Center

Intracardiac Tumor Presenting as Complete
Atrioventricular Block in an Asymptomatic Child
Shaine Morris, MD, Texas Children's Hospital

8:00 am  Oral Abstract Session 18 - 8:08 am  O103  Multicenter Evaluation of Dynamic
Imperial Ballroom B  Three-dimensional Whole-heart Myocardial
Ischemia and Viability: Ischemic Burden,  Perfusion Imaging for the Detection of
Reperfusion Injury, Fractional Flow Reserve, Coronary Artery Disease Defined by
Manganese Enhanced Stem Cell Imaging
Moderators: Anthony Aletras, PhD, University of
Central Greece
John Greenwood, MBChB, PhD, University of Leeds

8:00 am  Introductory Presentation
John Greenwood, MBChB, PhD, University of Leeds

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Three-dimensional Whole-heart Myocardial
Perfusion Imaging for the Detection of
Coronary Artery Disease Defined by
Fractional Flow Reserve
Robert Manka, MD, University Hospital Zurich

8:20 am  O104  Contribution of Reperfusion
Hemorrhage to T2 and T2* CMR in the
Quantification of Hemorrhage Extent
and Area-at-risk after Acute
Myocardial Infarction
Nilesh Ghugre, PhD, Sunnybrook Research Institute

8:32 am  O105  The Ischaemic and Scar Burden
Measured by Cardiac Magnetic Resonance
Imaging in Patients with Ischaemic
Coronary Heart Disease from the
CE-MARC Study
Sven Plein, MD, PhD, University of Leeds

8:44 am  O106  Manganese-enhanced Cardiac MRI
(MEMRI) Tracks Long-term In Vivo Survival
and Restorative Benefit of Transplanted
Human Amnion-Derived Mesenchymal
Stem Cells (hAMSC) after Porcine
Ischemia-Reperfusion Injury
Rajesh Dash, MD, PhD, Stanford University

8:56 am  O107  Paradoxical Effect of Smoking
Following Acute Myocardial Infarction
Giuliana Durighel, M.Sc., Imperial College

9:08 am  O108  The Assessment of Ischaemic
Burden: Validation of a “Functional”
Jeopardy Score against Cardiovascular
Magnetic Resonance
Shazia Hussain, MbChB, King's College London

9:20 pm  Q and A/Discussion

9:30 am – 10:00 am  Morning Break
Scientific Sessions

10:00 am – 11:30 am Concurrent Sessions

10:00 am Invited Lecture Session 15 – Grand Ballroom B
NIHD Heart Failure – CMR to Guide Therapy
Moderators: Patricia Bandettini, MD, NHLBI
Matthias Friedrich, MD, CMR Centre at the Montreal Heart Institute

Upon completion of this educational activity, the participant should be better able to:
- List the most important diagnostic targets for CMR in non-ischemic heart failure
- Provide examples of direct and relevant impact of CMR on therapeutic decision-making in patients with non-ischemic heart failure
- Discuss the potential and role of CMR in non-ischemic heart failure

10:20 am Myocardial Energy or Lack Thereof in Heart Failure
Robert Weiss, PhD, Johns Hopkins University

11:00 am Gadolinium and Novel Contrast Agents to Image the Endothelium
Shelton Caruheres, PhD, Washington University in St. Louis

11:20 am Q and A/Discussion

10:00 am Invited Lecture Session 16 – Yosemite A-B
The Cardiovascular System – Metabolism and Endothelium
Moderators: Thoralf Niendorf, PhD, Max-Delbrueck Center for Molecular Medicine
Oliver Rider, MA, BmbCh, Dphil, University of Oxford

Upon completion of this educational activity, the participant should be better able to:
- Describe and explain challenges and capabilities of novel methodology tailored for probing metabolism with CMR
- Identify and summarize progress and promises of novel and conventional contrast enhancement mechanisms/agents customized for imaging the endothelium
- Recognize, describe and select opportunities of emerging heteronuclear CMR technologies including imaging and spectroscopy of electrolytes, bioenergetics of the heart, in vivo measurement of hydrogen ion concentration and assessment of carbon metabolism
- Discuss, practice and disseminate clinical applications of metabolic and molecular CMR

10:20 am Advanced Imaging Techniques (Hyperpolarized 13C, Spectroscopy, Parametric Imaging, etc.)
Jurgen Schneider, PhD, University of Oxford

11:00 am Non-atherosclerotic Animal Models (Surgical, Genetic, Pharmacologic)
David Sosnovik, MD, Massachusetts General Hospital

11:20 am Q and A/Discussion

10:00 am Oral Abstraction Session 19 - Imperial Ballroom B
Basic Translational - New Techniques: Myocardial and Whole-body Tissue Characterization, T1 and Flow Mapping
Moderators: Alex Barker, PhD, Northwestern University
James Moon, MD, The Heart Hospital

10:20 am Imaging pH with Hyperpolarized C13: Methods and Potential Research Applications
Damian Tyler, PhD, University of Oxford

11:00 am Introductory Presentation
James Moon, MD, The Heart Hospital

11:20 am Q and A/Discussion
10:08 am  O109  Relationship of Diffuse Myocardial Fibrosis to Body Composition: The Multi-Ethnic Study of Atherosclerosis (MESA)
Songtao Liu, MD, NIH

10:20 am  O110  Myocardial Extracellular Volume Expansion in Patients with Hypertension
Francois-Pierre Mongeon, MD, Montreal Heart Institute

10:32 am  O111A  Multi-center Trial of LGE-MRI of the Left Atrium
Eugene Kholmovski, PhD, University of Utah

10:44 am  O112  Arrhythmia Insensitive Rapid Cardiac T1 Mapping Pulse Sequence
Daniel Kim, PhD, University of Utah

10:56 am  O113  Cardiovascular 4D Velocity Mapping Accelerated with k-t BLAST at 3.0 Tesla: 8-Channel vs. 32-Channel Coil Arrays
Arshad Zaman, PhD, University of Leeds

11:08 am  O114  Quantitative Myocardial Inflammation Assessed Using a Novel USPIO-Magnetic Resonance Imaging Acquisition and Analysis Protocol
Scott Semple, PhD, University of Edinburgh

11:20 am  Q and A/Discussion

11:30 am – 1:00 pm  Closing Plenary Session  Grand Ballroom A
Moderators: Andrew Arai, MD, NHLBI
Albert de Roos, MD, PhD, Leiden University Medical Center

Upon completion of this educational activity, the participant should be better able to:
• Recognize that there are elements of truth to both sides of controversial fields
• Provide examples of the need for translational research to explore new pathophysiological processes that may someday be useful in patients
• Discuss the role of cardiovascular MR in clinical practice today and how this may evolve in the intermediate future

11:30 am  Debate – T2 is Mandatory to Differentiate a Reversible Injury
11:30 am  Pro: Matthias Friedrich, MD, CMR Centre at the Montreal Heart Institute
11:45 am  Con: Raymond Kim, MD, Duke Medical Center

12:00 pm  Rebuttals

12:10 pm  Late Breaking News – CMR from Mice to Men
Andrew Arai, MD, NHLBI

12:30 pm  CMR: What is Unique and What Can Change Clinical Reality Today? CMR Beyond Beauty
Frank Rademakers, MD, PhD, University Hospitals Leuven

12:50 pm  Q and A/Discussion

1:00 pm – 1:30 pm  2013 Scientific Session  Grand Ballroom B
Highlights and Closing Remarks
Albert de Roos, MD, PhD, Leiden University Medical Center

SUNDAY PROGRAM
SCMR 2013 Technologist Workshop

This activity has been approved for credit by the American Society of Radiologic Technology (ASRT) for a maximum of 17.5 CE credits.

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

Friday, February 1, 2013
10:15 am - 6:00 pm
Plaza A

10:15 am – 10:20 am 
**Welcome Remarks**
Ralph Gentry, RT(R)(MR)(CT), William Beaumont Hospital

10:20 am – 12:00 pm **CMR Essentials**
Moderator: Jane Francis, DCR(R), DNM, The John Radcliffe Hospital
Chris Lawton, Bristol Heart Center

10:20 am **Physics for CMR**
Shelton Caruthers, PhD, Washington University in St. Louis

Upon completion of this educational activity, the participant should be better able to:
- Appreciate the source of signal generation from which CMR images are created
- Appreciate the basic physics behind CMR image acquisition and reconstruction
- Understand the need for and basic forms of motion compensation or correction in CMR

10:55 am **CMR Safety Update**
Elizabeth Tunnicliffe, PhD, University of Oxford

Upon completion of this educational activity, the participant should be better able to:
- Identify the range of risks posed by implants in the MR environment, and distinguish the physical mechanisms underlying these risks
- Comprehend differences between different types of scanner and how these impact on MR safety
- Identify relevant international guidance (including manufacturers’ guidance) on scanning implants in MR and apply it in daily practice

11:30 am **NSF – The Latest**
Martin Prince, MD, PhD, Cornell and Columbia Universities

Upon completion of this educational activity, the participant should be better able to:
- Understand the association of gadolinium and nephrogenic systemic fibrosis
- Identify patients at risk for nephrogenic systemic fibrosis
- Know how to minimize risk of nephrogenic systemic fibrosis

12:00 pm – 12:30 pm **SCMR Business Meeting**
Grand Ballroom A

12:30 pm – 1:30 pm **Lunch on own/ Posters/Exhibits**
Grand Ballroom B

1:30 pm – 3:15 pm **CMR Essentials: The Basics**
Moderator: Alison Fletcher, RT, Southampton General Hospital
Jennifer Bryant, RT, Southampton University

1:30 pm **ECG and Physiological Monitoring**
Robert Evers, BSRT, MR, CV, CT, NIH

Upon completion of this educational activity, the participant should be better able to:
- Discuss Physiologic monitoring differences in the MRI suite (today and yesterday)
- Understand how the variation in Field Strength affects the ECG signal (Magnetohydrodynamic effect)
- Understand techniques to improve the ECG in the MR environment

2:05 pm **Basic Cardiac Exam**
Ralph Gentry, RT(R)(MR)(CT), William Beaumont Hospital

Upon completion of this educational activity, the participant should be better able to:
- Use cardiac anatomy to set up CMR scans
- Identify the basic views of cardiac MRI
- Independently perform a Cardiac MRI

2:40 PM **Tips and Tricks for CMR – How to Acquire Perfect Images**
Alison Fletcher, RT, Southampton General Hospital

Upon completion of this educational activity, the participant should be better able to:
- Recognize potential image quality issues before and after the image acquisition
- Manipulate the imaging sequence to overcome physiological problems
- Understand how and why manipulation helps produce the perfect image

3:15 pm – 3:45 pm **Afternoon Break**
Grand Ballroom B

3:45 pm – 5:30 pm **Basic CMR: Anatomy and Physiology**
Moderator: Jane Francis, DCR(R), DNM, The John Radcliffe Hospital
Kelley Adair, RT, Froedtert Hospital and Medical College

3:45 pm **Cardiac Anatomy with CMR**
Stephen Darty, BS, RT, Duke University Medical Center

Upon completion of this educational activity, the participant should be better able to:
- Identify basic cardiac anatomy
- Understand basic CMR scan planes for cardiac anatomy
- Utilize CMR scan techniques to better visualize cardiac anatomy

4:20 pm **Cardiac Physiology – What We Measure**
Cameron Holloway, MBBS, MRCP, St. Vincent’s Hospital, Sydney

Upon completion of this educational activity, the participant should be better able to:
- Have a basic understanding of normal cardiac physiology
- Have a basic understanding of diseases which alter cardiac physiology
- Appreciate the different sequences using in cardiac MR to determine abnormal physiology
30

4:55 pm  Cardiac Function: How and Why
Patricia Bandettini, MD, NHLBI
Upon completion of this educational activity, the participant should be better able to:
• Identify basic cardiac anatomy
• Understand the methodology by which cardiac function is obtained and analyzed
• Understand the indications and rationale for performing cardiac function

5:30 pm – 5:45 pm  Friday Round-up: Pertinent Points of the Day
Jane Francis, DCR(R), DNM, The John Radcliffe Hospital

6:30 pm - 7:30 pm  Moderated Poster  Grand Ballroom B
Session 1/ Wine and Cheese Reception

Saturday, February 2, 2013
7:45 am - 5:30 pm  Plaza A

7:45 am – 9:30 am  Inherited and Acquired Cardiomyopathies
Moderator: Anne Davis, RT, Oxford University Hospitals
Kraig Kissinger, RT, Beth Israel Deaconess Medical Center

7:45 am  Hypertrophic Cardiomyopathy
James Moon, MRCP, The Heart Hospital
Upon completion of this educational activity, the participant should be better able to:
• Understand the role of CMR for imaging structure and function in CMR
• Understand the role for scar imaging
• Understanding the differential of HCM

8:20 am  Dilated Cardiomyopathy
Valentina Puntnam, MD, PhD, King's College London
Upon completion of this educational activity, the participant should be better able to:
• Understand the evidence of the solid role for CMR in diagnosis, prognosis and guiding treatment
• Cope when faced with the challenging cases (difficult to image, difficult to diagnose)
• Understand future perspectives on the role of CMR in DCM (why should it be done in every patient presenting with HF)

8:55 am  Amyloidosis and Other Storage Diseases
Theo Karamitsos, MD, PhD, University of Oxford
Upon completion of this educational activity, the participant should be better able to:
• Discuss the advantages CMR has over other imaging modalities in the assessment of patients with infiltrative diseases
• Better plan a CMR scan for patients with suspected cardiac amyloidosis or other infiltrative diseases
• Understand the use of novel tissue characterization techniques in the CMR assessment of patients with infiltrative diseases

9:30 am – 10:00 am  Morning Break  Grand Ballroom B

10:00 am – 11:30 am  Abstract Presentations
Moderator: Ralph Gentry, RT(R)(MR)(CT), William Beaumont Hospital
Mercedes Pereyra, RT, BS, MBA, Circle CVI

10:00 am  Third Place Abstract
T 3  Imaging the PM/AICD Patient; Fancy or Fanatical?
June Yamrozik, BS, Allegheny General Hospital

10:10 am  Second Place Abstract
T 2  Left Atrial Appendage Thrombus; Young or Old? Role of CMR in Definition
Mohammed Alnasser, BS, Allegheny General Hospital

10:20 am  First Place Abstract
T 1  Initial Experience of Imaging Cardiac Sarcoidosis Using Hybrid PET-MR - A Technologist’s Case Study
Celia O'Meara, BSc (Hons), University College London Hospitals

10:30 am - 11:30 am  Vendor Session: All You Wanted to Know About CMR But Were Afraid to Ask

11:30 am – 12:30 pm  Moderated Poster  Grand Ballroom B
Session 2/Lunch/Exhibits

12:30 pm – 2:10 pm  Perfusion and Viability Imaging
Moderator: Beth Goddu, RT, Beth Israel Deaconess Medical Center
Ronald Williams, BA, RT(R) (MR), Allegheny General Hospital

12:30 pm  CMR: Stress Testing – Safety and Specifics in Resuscitation
Florian von Knobelsdorff, MD, Charité Medical University
Upon completion of this educational activity, the participant should be better able to:
• Know potential hazards of stress CMR including medication, contrast agents, magnetic field and limited monitoring
• Know the specifics for monitoring and resuscitation during stress CMR
• Understand the need for continuous education and training to guarantee low adverse event rates during stress CMR

1:05 pm  CMR Detection of Ischemia: Which Method When
John Greenwood, MBChB, PhD, University of Leeds
Upon completion of this educational activity, the participant should be better able to:
• Understand the utility of dobutamine stress CMR
• Understand the utility of adenosine stress CMR
• Understand how to optimise stress perfusion images
1:40 pm  Myocardial Viability
James Shambrook, BM, MRCP, University Hospital Southampton
Upon completion of this educational activity, the participant should be better able to:
• Understand the term myocardial viability, and its significance in clinical practice
• Appreciate the variety of cardiovascular MRI sequences designed to assess myocardial viability, and their advantages and disadvantages
• Have an awareness of recent literature influencing current practice

2:10 pm – 2:40 pm  Afternoon Break  Grand Ballroom B

2:40 pm – 5:15 pm  Vascular Imaging
Moderator: Kraig Kissinger, RT, Beth Israel Deaconess Medical Center
Mercedes Pereyra, RT, BS, MBA, Circle CVI

2:40 pm  Cardiovascular Complications of Obesity
Oliver Rider, BMBCH, MA, University of Oxford
Upon completion of this educational activity, the participant should be better able to:
• Describe and explain the changes in left ventricular morphology, function and energetics that accompany obesity and the potential impact that these changes have on outcome
• Identify the changes in aortic elasticity that occur in obesity and understand the role of free fatty acid levels in producing this phenotype
• Understand the effect of sustained and successful weight loss on cardiovascular function
• Recognise and understand the benefits and drawbacks that multi-parametric CMR brings to the study of obesity

3:15 pm  MRA Techniques
Christopher Francois, MD, University of Wisconsin-Madison
Upon completion of this educational activity, the participant should be better able to:
• Summarize differences in time-resolved and static contrast-enhanced MRA techniques
• Describe differences between various gadolinium-based contrast agents used for contrast-enhanced MRA, including performance at 3.0T
• Distinguish between various non-contrast-enhanced MRA techniques

3:50 pm  Coronary Artery and Plaque Imaging
Debiao Li, PhD, Cedars-Sinai Medical Center
Upon completion of this educational activity, the participant should be better able to:
• Understand the MRI techniques for coronary artery and plaque imaging
• Understand preliminary clinical performances of these imaging techniques
• Obtain knowledge of the practical imaging protocols
• Understand new developments to improve the techniques

4:25 pm  Technologists Quiz
Ralph Gentry, RT(R)(MR)(CT), William Beaumont Hospital

5:15 pm – 5:30 pm  Saturday Round-up: Pertinent Points of the Day
Kraig Kissinger, RT, Beth Israel Deaconess Medical Center

5:30 pm – 6:00 pm  CMR Technology Updates  Grand Ballroom A

6:00 pm – 6:30 pm  Award Presentations  Grand Ballroom A

6:30 pm – 8:00 pm  Award Reception  Golden Gate Room

Sunday, February 3, 2013
8:00 am - 12:00 pm  Plaza A

8:00 am – 9:45 am  The Right Ventricle
Moderators Stephen Darty, BS, RT(N)(MR), Duke University Medical Center
Alison Fletcher, RT, Southampton General Hospital

8:00 am  ARVC
David Bluemke, MD, PhD, NIH
Upon completion of this educational activity, the participant should be better able to:
• Describe the MRI findings of ARVC
• Describe typical MRI protocol for imaging ARVC

8:35 am  Pulmonary Hypertension
William Bradlow, BMBS, Oxford University Hospitals
Upon completion of this educational activity, the participant should be better able to:
• Understand the definition and classification of pulmonary hypertension
• Appreciate the role of CMR in the assessment and follow-up of patients with pulmonary hypertension
• Understand how CMR might be used in the future in this patient group

9:10 am  The RV in Congenital Heart Disease
Marina Hughes, MRCP, DPhil, Great Ormond Street Hospital
Upon completion of this educational activity, the participant should be better able to:
• Understand the advantage of Cardiac MR imaging for congenital heart disease
• Understand the morphology of the common types of congenitally abnormal RVs
• Become more familiar with the common types of surgical procedures to correct the congenital defects affecting the RV

9:45 am – 10:15 am  Morning Break  Grand Ballroom B

10:15 am – 11:50 am  Advanced CMR
Moderator: Robert Evers, BSRT, MR, CV, CT, NIH Emer Sonnex, MPhil, DCRR, DCRT, University of Alberta Hospitals
Multi-modality Imaging
Michael Gallagher, MD, William Beaumont Hospital
Upon completion of this educational activity, the participant should be better able to:
• Understand the role of multi-modality imaging in a variety of clinical applications
• Be familiar with the relative strength and weaknesses of cardiac MRI in comparison with other imaging modalities
• Discuss unique patient populations who benefit from cardiac MRI after an echocardiogram

Multi-nuclear Spectroscopy
Stefan Neubauer, MD, University of Oxford
Upon completion of this educational activity, the participant should be better able to:
• Understand the differences between MRI and MRS
• Understand the potential of cardiac 31P, 13C, 23Na and 1H MR spectroscopy
• Be aware of the main current research applications of MRS
• Appreciate the options for further technical improvements and possible future clinical application of MRS

Hyperpolarization: The Next Step
Damian Tyler, PhD, University of Oxford
Upon completion of this educational activity, the participant should be better able to:
• Identify the limitations of multi-nuclear spectroscopy and understand the different techniques available to generate hyperpolarized tracers
• Understand the processes involved in the dynamic nuclear polarization technique of hyperpolarization
• Review the current literature on the application of hyperpolarization techniques in the study of cardiovascular metabolism

Workshop Round-up: Highlights of the Meeting
Ralph Gentry, RT(R)(MR)(CT), William Beaumont Hospital

11:30 am – 1:00 pm Closing Plenary Session Grand Ballroom A
Moderators: Andrew Arai, MD, NHLBI
Albert de Roos, MD, PhD, Leiden University Medical Center

11:30 am Debate – T2 is Mandatory to Differentiate a Reversible Injury
Pro: Matthias Friedrich, MD, CMR Centre at the Montreal Heart Institute
Con: Raymond Kim, MD, Duke Medical Center

12:00 pm Rebuttals

12:10 pm Late Breaking News – CMR from Mice to Men
Andrew Arai, MD, NHLBI

12:30 pm CMR: What is Unique and What Can Change Clinical Reality Today? CMR Beyond Beauty
Frank Rademakers, MD, PhD, University Hospitals Leuven

12:50 pm Q and A/Discussion

1:00 pm – 1:30 pm 2013 Scientific Session Grand Ballroom A
Highlights and Closing Remarks
Albert de Roos, MD, PhD, Leiden University Medical Center

Technologist Posters
The posters accepted for the Technologist Workshop will be on display in both sessions. (T1-T11)

T1 Celia O’Meara Initial Experience of Imaging Cardiac Sarcoidosis Using Hybrid PET-MR - A Technologist’s Case Study
T2 Mohammed Alnasser Left Atrial Appendage Thrombus; Young or Old? Role of CMR in Definition
T3 June Yannozik Imaging the PM/AICD Patient; Fancy or Fanatical?
T4 Kelley Thoumlasenh Experience with Cardiac MR Imaging of Patients with legacy ICDs or Pacemakers
T5 Rick Wage Three Dimensional Delayed Enhancement Cardiovascular Magnetic Resonance Imaging of the Left Atrium and Pulmonary Veins for Atrial Fibrillation Ablation
T6 Michelle Walkden Imaging Strategies of Coarctation Repairs
T7 Chris Lawton Accuracy of Large Vessel Flow Evaluation Performed by Technologists in Patients with Congenital Heart Disease Using Cardiac MRI
T8 Ronald Williams The Twisted Body: A Look into Heterotaxy
T9 Alison Fletcher Steady State Free Precession Cardiovascular Magnetic Resonance: Accuracy of Left and Right Ventricular Functional Assessment in Children
T10 Alison Fletcher Transaxial or Short Axis Right Ventricular Volume Measurements – Which Method Correlates More Closely with Main Pulmonary Artery Flow Values in Children Aged 9 Years?
T11 Mary Watkins Cardiovascular MR Function and Coronaries: CMR 15 Minute Express
Friday, February 1, 2013
6:30 PM – 7:30 PM
Poster Presentations – Session 1 –
Not accredited for CME
You are invited to meet the poster authors on Friday evening during the Wine and Cheese Reception.

CATEGORIES BEING PRESENTED IN POSTER SESSION 1 ARE:
Basic Translational – New Techniques Ready for Clinical Application (P1-P58)
Basic Translational – Post-Processing (P73-P90)
Basic Translational – Pre-clinical Validation of an Existing Technique (P123-P139)
CAD Ischemia and Viability (P172-P215)
CAD Other (P222-P227)
Clinical Outcome and Prognosis (P251-P280)

Poster Directory
Basic Translational – New Techniques Ready for Clinical Application (Poster Session I)
P1 Elizabeth Tunnicliffe
   Myocardial Diffusion Tensor Imaging Using Diffusion-prepared SSFP
P2 Choukri Mekkaoui
   Myocardial Infarct Delineation In Vivo Using Diffusion Tensor MRI and the Tractographic Propagation Angle
P3 Glenn Slavin
   True T1 Mapping with SMART1Map Saturation Method Using Adaptive Recovery Times for Cardiac T1 Mapping: A Comparison with MOLLI
P4 Loi Do
   MRI Characterization of Myocardial and Microvascular Injuries
P5 Anthony Price
   Frequency Drift during Intensive SSFP Scanning: Implications and Solution for Neonatal CMR
P6 Christopher Nguyen
   In vivo Cardiac Diffusion MRI: Second Order Motion Compensated Diffusion-Prepared Balanced Steady State Free Precession (SOMOCO Diff Prep bSSFP)
P7 Meral Reyhan
   Left Ventricular Twist, but not Circumferential-Longitudinal Shear Angle, Increases with Increasing Age in Normal Subjects
P8 Brett Feinster
   Vorticity for the Assessment of Right Ventricular Diastolic Dysfunction Using 4D Flow CMR
P9 Darach O h-Ici
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Saturday, February 2, 2013
12:30 PM – 1:30 PM
Poster Presentations – Session 2 –
Not accredited for CME
You are invited to meet the poster authors on Saturday afternoon from 12:30 pm – 1:30 pm.

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Congenital Heart Disease (P281-P300)
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Non-ischemic Heart Disease – Other (P91-P122)
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Physiology and Metabolism including Spectroscopy (P216-P220)
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P28 Darach O h-lici  
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P29 Sebastian Weingärtner  
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P31 Eun-Ah Park  
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King, Gregory: Nothing to disclose
Kozerke, Sebastian: Nothing to disclose
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Liu, Songtao: Nothing to disclose
Li-Yueh, Hsu: Nothing to disclose
Loewe, Christian: Speakers bureau - Bracco, Guerbet, Siemens, GE Healthcare, Covidien
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Mahmod, Masliza: Nothing to disclose
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Malowski, Marcus: Nothing to disclose
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Manning, Warren: Grant/Research Support - Philips Medical Systems, Lantheus Medical
Mard, Michael: Nothing to disclose
Martin, Edward: Consultant - Siemens. Grant/Research Support - Siemens. Speaker's bureau - Lantheus
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Moon, James: Grant/Research Support - GSK, Guerbet, Genzyme. Consultant - Pfizer
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<td>Yuan, Chun</td>
<td>Grant/Research Support - Philips Healthcare. Consultant - ImagePace, Boehringer Ingelheim</td>
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<td>Zaman, Arshad</td>
<td>Nothing to disclose</td>
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<td>Zarineh, Niloofar</td>
<td>Nothing to disclose</td>
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<td>Zimmerman, Stefan</td>
<td>Nothing to disclose</td>
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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 Inc. is a Calgary based company that develops analytics software for the evaluation of cardiovascular MRI and CT images. Circle operates worldwide and has installations of their products cmr42, cvi42 and report42 in over 25 countries. Circle's goal is to contribute to quality in cardiovascular imaging and research, maximizing the achievable benefit for patients by enabling healthcare providers to accurately and effectively analyze cardiovascular images.

Diagnosoft provides innovative software tools for cardiac MRI analysis and reporting. Diagnosoft's HARP technology is the Gold Standard for measuring changes in regional cardiac function, allowing for earlier detection of heart disease other than cardiac imaging methods.

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The International Society for Magnetic Resonance in Medicine is an international, nonprofit, scientific association whose purpose is to promote communication, research, development, and applications in the field of magnetic resonance in medicine and biology and other related topics and to develop and provide channels and facilities for continuing education in the field. Its multidisciplinary membership of over 6,000 consists of clinicians, physicists, engineers, biochemists, and technologists.

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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.

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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.

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The Society for Cardiovascular Magnetic Resonance (SCMR) is a professional association whose vision is to be the recognized representative and advocate for physicians, scientists, and technologists who work in the field of cardiovascular magnetic resonance. 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.

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