CMR 2018
THE JOINT EUROCMR / SCMR MEETING
5th EDITION

Improving Clinical Value by Technical Advances

Barcelona, Spain
31 January - 3 February 2018

FINAL PROGRAMME

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<table>
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<tr>
<th>Time</th>
<th>Tuesday 30 January</th>
<th>Wednesday 31 January</th>
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<td>7:00</td>
<td>Registration</td>
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<td>Faculty &amp; Members Lounge</td>
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Bogdan A. Popescu, Chiara Bucciarelli-Ducci
EACVI President / EACVI CMR Vice-President and Section Chair

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Programme Co-Chairperson Robin Nijveldt (EACVI)
Abstract Co-Chairperson Allison Hays (SCMR)
Abstract Co-Chairperson Jose Rodriguez Palomares (EACVI)

Case Sessions Directors
John Paul Carpenter
Michael Hope

ISMRM-SCMR Workshop Programme Chairs
Peter Kellman
Sebastian Kozerke

CMR2018
THE JOINT EUCOR/SCMR MEETING
SIXTH EDITION
WELCOME ADDRESS

The international CMR community will gather in Barcelona for CMR 2018, the joint EuroCMR*/SCMR meeting organised by the European Association of Cardiovascular Imaging (EACVI), a registered branch of the European Society of Cardiology, and the Society for Cardiovascular Magnetic Resonance (SCMR).

CMR 2018 will focus on the theme of “Improving Clinical Value by Technical Advances”, emphasising the common goal of improving clinical outcomes in cardiovascular disease through innovation in basic MR development and medical engineering.

By providing a space where experts from all over the world with different experience and background share knowledge, the meeting offers more than 35 hours of presentations and cutting-edge information both on a novice and advanced level.

Particular care is given to guarantee time for discussions, specialised topics, case presentations, speed mentoring and focused pre-conferences as well as sessions for non-physicians and basic scientists. Attendees new to CMR will have the opportunity of pursuing a Level 1 Certification Track and learn the basic foundation required for a research or clinical career in the field.

In addition to the main meeting, a co-hosted ISMRM workshop will focus on Ischemia Imaging, from pathophysiological models, to advancements in imaging sequences and clinical applications.

Top leaders in the field of cardiology and radiology will provide the important context for this exciting event.

Let CMR 2018 expose you to state-of-the-art technological advances and innovative clinical imaging trials while generating new ideas to allow CMR to flourish worldwide!

Matthias G. Friedrich
SCMR President

Robin Nijveldt, Juliano Fernandes
Programme Co-Chairpersons

Bogdan A. Popescu, Chiara Bucciarelli-Ducci
EACVI President / EACVI CMR
Vice-President and Section Chair

Jose Francisco Rodríguez Palomares, Allison Hays
Abstract Co-Chairpersons
<table>
<thead>
<tr>
<th>FACULTY</th>
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<tr>
<td>Robert Adam, United Kingdom</td>
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<td>Niti Aggarwal, United States</td>
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<td>Timothy Albert, United States</td>
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<td>Anthony Aletras, Greece</td>
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<td>W. Patricia Bandettini, United States</td>
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<td>Rebecca Beroukhim, United States</td>
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<td>Antonio Berruezo, United States</td>
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<td>Colin Berry, United Kingdom</td>
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<td>Nuno Bettencourt, Portugal</td>
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<td>Anish Bhua, United Kingdom</td>
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<td>Robert Biederman, United States</td>
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<td>Jens Bremerich, Switzerland</td>
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<td>David Broadbent, United Kingdom</td>
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<td>Josep Brugada, Spain</td>
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<td>Jennifer Bryant, Singapore</td>
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<td>Chiara Bucciarelli-Ducci, United Kingdom</td>
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<td>Craig Butler, Canada</td>
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<td>Michael Campbell, United States</td>
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<td>Yu-Cheng Cheng, China (People’s Republic)</td>
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<td>Stephen Cheung, Hong Kong</td>
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<td>Nadine Choueiter, United States</td>
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<td>Kelvin Chow, United States</td>
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<td>Arun Dahiya, Australia</td>
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<td>Stephen Darty, United States</td>
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<td>Dana Dawson, United Kingdom</td>
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<td>Francesco De Cobelli, Italy</td>
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<td>Erasmo De La Pena-Almaguer, Mexico</td>
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<td>Rohan Dharmakumar, United States</td>
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<td>Adam Dorfman, United States</td>
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<td>Robert Edelman, United States</td>
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<td>Thor Edvardsen, Norway</td>
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<td>Ingo Eitel, Germany</td>
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<td>Suzette Elias-Smale, The Netherlands</td>
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CMR2018
THE JOINT EUROCME®/SCMR MEETING
SIXTH EDITION
FACULTY

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Kuberan Pushparajah, United Kingdom
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Francesca Raimondi, France
Subha Raman, United States
Rajiv Ramasawmy, United States
Vikas Rathi, United States
Rahul Rathod, United States
Kanishka Ratnayaka, United States
Reza Razavi, United Kingdom
Surendranath Reddy, United States
Nathaniel Reichek, United States
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Jose Rodriguez-Palomares, Spain
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Val Runge, Switzerland
Tobias Rutz, Switzerland
Hajime Sakuma, Japan
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Tobias Schaeffter, Germany
Michael Schär, United States
Erik Schelbert, United States
Silvia Schievano, United Kingdom
Ehud Schmidt, United States
Jeanette Schulz-Menger, Germany
Juerg Schwitter, Switzerland
Aurelio Secinaro, Italy
Nicole Seiberlich, United States
Joseph Selvanayagam, Australia
Roxi Senior, United Kingdom
Juliana Serafim, Brazil
Dipan Shah, United States
Behzad Sharif, United States
Chetan Shenoy, United States
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Lilia Sierra-Galan, Mexico
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Maria Eduarda Siqueira, Brazil
Tim Slesnick, United States
Philipp Sommer, Germany
David Sosnovik, United States
Oliver Speck, United States
Barbara Srichai, United States
Kevin Steel, United States
Matthias Stuber, United States
Avan Suinesiaputra, New Zealand
Mushabbar Syed, United States
Gergely Szantho, United Kingdom
Balaji Tamarappoo, United States
Oliver Tann, United Kingdom
Michael Taylor, United States
Andrew Taylor, Australia
Raquel Themudo, Sweden
Christoph Tillmanns, Germany
Adam Timmis, United States

Solenn Toupin, United States
Marly Uellendahl, Brazil
Martin Ugander, Sweden
Seth Uretsky, United States
Sergio Uribe, Chile
Anne Marie Valente, United States
Emanuela Valsangiacom Buechel, Switzerland
Rob van der Geest, Netherlands
Ramon van Loon, Netherlands
Pim van Ooij, Netherlands
Albert van Rossum, Netherlands
Moriel Vandsburger, United States
Vassilis Vassiliou, United Kingdom
Hein Verberne, United States
Magalie Viallon, France
Inga Voges, United Kingdom
Florian von Knobelsdorff, Germany
Rachel Wald, Canada
Michelle Walkdon, United Kingdom
Jonathan Weinsaft, United States
Robert Weiss, United States
David Wendell, United States
Mark Westwood, United Kingdom
James White, United States
Rohan Wijesurendra, United Kingdom
Ronald Williams, United States
Joel Wilson, United States
Walter Witschey, United States
Steven Wolff, United States
James Wong, United Kingdom
Graham Wright, Canada
Hui Xue, United States
Qi Yang, United States
Shi-Joon Yoo, Canada
Alistair Young, New Zealand
Ali N Zaidi, United States
Karolina Zareba, United States
Stefan Zimmerman, United States

www.cmr2018.org
GENERAL INFORMATION

Venue
CCIB – Centre Convencions Internacional de Barcelona
Plaça de Willy Brandt, 11-14, 08019 Barcelona, Spain
Phone: +34 932301000
www.ccib.es

Admission & Badges
Your badge is required for admission to all scientific sessions and to the activities at CMR 2018.
Please be sure to wear your badge at all times.

Registration Desk
The registration desk is located in the main hall.

Opening hours:
- Tuesday 30 January 15:00 - 19:00
- Wednesday 31 January 07:30 - 19:00
- Thursday 1 February 07:30 - 19:00
- Friday 2 February 07:30 - 19:00
- Saturday 3 February 07:30 - 17:00

Your registration includes unlimited access to all scientific sessions, coffee breaks and the social events on Thursday, Friday and Saturday evenings.

Free WiFi
Network Name: cmr2018
Username: cmr2018
Password: cmr2018

CMR2018 Mobile App
An interactive CMR 2018 mobile app is available for attendees, on all mobile devices and tablets. Follow the instructions below to access the app.
1. Search for “eventScribe” in the Apple App Store or Google Play Store. Install and open the app. Then, search for “CMR 2018.” Click to launch.
2. For pre-registrants, select “Login” and enter your username and password that was emailed to you.
3. For onsite registrants, select “Create Account.”

Exhibition Opening Hours
- Tuesday 30 January Closed
- Wednesday 31 January Closed
- Thursday 1 February 10:15 - 20:30
- Friday 2 February 08:00 - 20:30
- Saturday 3 February 08:00 - 19:30

Do not forget to visit the exhibits and collect the stamps for the prize draw (see Exhibition section for more details)
### General Information

#### Faculty & Members Lounge
Enjoy a cup of tea/coffee in a relaxed atmosphere; the Faculty & Members Lounge is open to SCMR members, EACVI Silver & Gold members and faculty. Printers are available.

**Opening hours:**
- Wednesday 31 January 07:30 - 19:00
- Thursday 1 February 07:30 - 19:00
- Friday 2 February 07:30 - 19:00
- Saturday 3 February 07:30 - 18:30

#### CME Certificates
Please submit the completed UEMS/EACCME Evaluation Form (inserted in your delegate bag) at the registration desk in order to receive the UEMS/EACCME Certificate. Certificates will be delivered at the registration desk as of Friday 2 February.

#### Coffee Breaks and Refreshments
Coffee and refreshments will be served to delegates in the Exhibition Area. A cash bar is available in the Exhibition Area.

#### Twitter
Follow us and tweet on #cmr2018

#### Liability and Insurance
The Congress Secretariat and Organisers cannot accept liability for personal accidents, loss or damage to private property of participants, either during or as result of the Congress. Participants are advised to take out their own personal travel and health insurance for their trip.

#### Safety and Security
Please do not leave bags or suitcases unattended at any time, whether inside or outside the session halls.

#### Technical Secretariat
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[www.cmr2018.org](http://www.cmr2018.org)
We kindly ask all speakers to check-in with our IT partner CYIM in the Speaker Service Center. You can update / edit your presentations there or upload a new version. Please note that deadline to do so is **2 hours prior** to your presentation time. Support technicians will be available to assist you during the opening hours:

- **Tuesday 30 January** 15:00 - 19:00
- **Wednesday 31 January** 07:30 - 19:00
- **Thursday 1 February** 07:30 - 19:00
- **Friday 2 February** 07:30 - 19:00
- **Saturday 3 February** 07:30 - 17:00

**Special Sessions**

Don’t miss our special sessions (more details in the programme):

- **Opening Plenary**: Thursday 1 February - 1:30pm – 2:45pm, Plenary Room
- **Early Career Plenary**: Thursday 1 February – 6:05pm – 7:00pm, Plenary Room
- **Early Career Awards - Oral Abstracts**: Thursday and Friday 1-2 February, Room 4
- **Invasive Live Case**: Friday 2 February – 11:40am – 12:25pm, Plenary Room
- **Outreach Sessions**: Saturday 3 February – 8:00am – 12:30pm, Plenary Room
- **Best Moderated ePoster**: Saturday 3 February – 1:30pm – 2:55pm, Room 6
- **Closing Plenary**: Saturday 3 February – 4:30pm – 6:30pm, Plenary Room

Do not miss the special satellite symposia from our Industry partners in the Lecture room (please check the programme for full details).
**Level 1 CMR Certification**

To receive your CMR Level 1 Certificate after the meeting, you must be pre-registered and prove your attendance at 85% of the sessions of the dedicated track (look for the Level 1 label on the programme pages). Please be sure to scan your badge at the beginning and at the end of each session of the dedicated track. The barcode scanners are located at the entrance of each lecture room. Certificate will be sent by email after the Congress.

**Special Courses**

Some sessions included in the track are parallel sessions; this has been taken into account for the 85%. Seats are limited and pre-registration was mandatory to attend these sessions. They will be run in the Course Room (please check the programme for full details).

**Level 2/3 Dedicated Case Sessions (stress perfusion and congenital)**

Seats are limited and pre-registration was mandatory to attend these courses. They will be run in the Hands-on Room (please check the programme for full details). Certificates will be provided after the sessions at the registration desk.

**Abstracts, Cases, Posters, ePosters and eCases**

Posters and Cases are displayed in the Poster Area (exhibitio hall). Moderated ePoster/eCase sessions are presented during coffee breaks from Thursday until Saturday (please check the programme for full details).

Abstract/Cases sessions are run throughout the congress in various rooms (please check the programme for full details).

**Session Reports**

Senior experts in the field will provide a report on the key messages from a selection of sessions. Available on EACVI and SCMR websites.

**Session Recordings**

Most of the sessions will be recorded and available on EACVI and SCMR websites.
SPECIAL EVENTS AND INITIATIVES

Prize Draw

Enter our lucky draw for a chance to win an iPad! Visit all booths and collect exhibitors’ stamps on your competition card (inserted in your delegate bag). Once you collected ALL stamps, hand it to the registration desk.

Exhibition opening hours:
Tuesday 30 January     Closed
Wednesday 31 January   Closed
Thursday 1 February    10:15 - 20:30
Friday 2 February      08:00 - 20:30
Saturday 3 February    08:00 - 19:30

The lucky winner will be announced during the Closing Plenary.

Social Events

• Wednesday 31 January - 18:30 – Welcome drink for workshop attendees only.
• Thursday 1 February – 19:00 – A light welcome drink will be served in the exhibition area after the Early Career Plenary.
• Friday 2 February – 19:00 – The Meet & Greet Reception will be held in the exhibition area.
• Saturday 3 February – 19:00 – A cocktail will be served as a farewell in the exhibition area.

Speed Mentoring

Speed mentoring in groups will be run in the Mentoring Room on Level 1 (Room 129&130) according to the appointment received by registered delegates during Break Times. Applications on site will depend on availability (please check).

Congress News

Pick up your daily congress news at the exhibition entrance every morning before the first session or take your chance to grab the last ones either on the EACVI or SCMR stands, at the registration desks or in the Faculty and Members lounge.

European CMR Exams

The CMR and CHD CMR certification exams will take place at the CCIB in rooms 211 and 212 (Level 2) on Wednesday 31 January 2018. Please note that the CMR exam participation is subject to distinct registration. Please bring your exam registration confirmation to access exam. Registered exam participants have received detailed instructions. If not, please check with the registration desk.
CME ACCREDITATION

Accreditation

The CMR 2018 – The joint EuroCMR/SCMR Meeting, Barcelona, Spain, 31/01/2018-03/02/2018 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 24 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity. Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 CreditsTM. Information on the process to convert EACCME® credit to AMA credit can be found at www.ama-assn.org/education/earn-credit-participation-international-activities.

Live educational activities, occurring outside of Canada, recognised by the UEMS-EACCME® for ECMEC®s are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada.

Please submit the completed UEMS/EACCME Evaluation Form (inserted in your delegate bag) at the end of the meeting in order to receive the UEMS/EACCME Certificate. Certificates will be sent by email after the congress.

Disclosure

All speakers and chairpersons participating in the programme have disclosed potential conflict of interest that might cause a bias in the presentations. The Organising Committee is responsible for ensuring that all potential conflict of interest relevant to the programme are declared to the audience prior to the CME activities.
1. ISMRM/SCMR Workshop - Cardiovascular Magnetic Resonance in Ischemic Heart Disease (separate registration required)

**Dates and Times:**
Wed, 31 Jan 31 8:00 – 18:00 Thu, 1 Feb 8:00 – 12:30

**Location:** Plenary Room (rooms 111+112) – Level 1

**Description:** The workshop seeks to discuss ischemic heart disease in its full depth as it relates to CMR. This 1+1/2 day program will start by reviewing basic physiologic and pathophysiologic details of the coronary circulation that serve as a basis to our understanding of CMR stress exams. It will then follow with a discussion on methods of perfusion imaging, quantification strategies and non-contrast methods to evaluate ischemia. On the second day, the discussion will include how CMR perfusion correlates to other methods and will end with open questions and a debate with top experts in the field.

Within the program, specific abstracts which correlate to the topics discussed will be presented both orally and in poster format, providing further support for the lectures and debates.

**Who should attend:** This workshop should be attended by any member of the community who is performing or plans to run stress CMR exams. Given the current evidence of the many CMR trials in IHD showing the benefits of the method, ischemia imaging is one of the priorities in our educational program for CMR2018 and the workshop will serve as a solid base for all other sessions in the meeting.

2. Pediatric and Congenital Pre-Conference

**Dates and Times:**
Thu, 1 Feb 8:00a – 12:30

**Location:** Lecture Room (Hall 6) – Level 0

**Description:** This session integrates with other sessions to provide the pedagogical base necessary for physicians and other professional to understand basic MRI concepts in safety, physics, sequence designs and contrast usage, with a focus on CMR. In addition to that, the main sequences and protocols used in CMR will be introduced first with a description on the technical method and then on a how-to basis, providing delegates with both the background knowledge and how to apply them in practice.

**Who should attend:** Professionals new to CMR and those who already practice the method but want to be updated in the basic techniques and principles of MRI. Its focus is on beginner and intermediate knowledge, with a very practical approach to be readily applicable in your CMR routine.

3. Physician Pre-Conference: Basic MRI and Physics

**Dates and Times:** Thu, 1 Feb 8:00 – 12:30

**Location:** Case Room (Hall 8) – Level 0

**Description:** This preconference course seeks to provide the educational base necessary for physicians and other professional to understand basic MRI concepts in safety, physics, sequence designs and contrast usage, with a focus on CMR. In addition to that, the main sequences and protocols used in CMR will be introduced first with a description on the technical method and then on a how-to basis, providing delegates with both the background knowledge and how to apply them in practice.

**Who should attend:** Professionals new to CMR and those who already practice the method but want to be updated in the basic techniques and principles of MRI. Its focus is on beginner and intermediate knowledge, with a very practical approach to be readily applicable in your CMR routine.

4. Opening Plenary - CMR's Role in Arrhythmia and Sudden Cardiac Death

**A Joint Session with the European Heart Rhythm Association (EHRA)**

**Date and Time:** Thu, Feb 1 12:30 – 14:45

**Location:** Plenary Room (rooms 111+112) – Level 1

**Description:** The grand opening of CMR2018, this session will celebrate the presence of the CMR Community in Barcelona by focusing on a topic which is so well developed in the city relating to Arrhythmia. Keynote lectures on this topic will highlight recent developments in EP and ventricular arrhythmias, how the CMR community can collaborate with EP physicians, the lessons in SCD by CMR and an update on imaging patients with implantable devices.

**Who should attend:** All delegates

5. Moderated ePosters and eCases

**Dates and Times:** Thu, 1 Feb 15:00-15:45
Fri, 2 Feb 10:15 – 11:00 and 15:45 – 16:30
Sat, 3 Feb 10:15 – 11:00

**Location:** Exhibition Hall – Level 0

**Description:** ePosters and eCases will be presented in four sessions during the break times, moderated by some of the top experts in each topic. The ePosters will be divided in 12 of the most important topics in CMR and the best poster from each
SESSIONS AND TRACKS DESCRIPTION

6. Lecture Sessions (LS1 to LS7)

**Dates and Times:**
- Thu, 1 Feb 15:45 – 17:10
- Fri, 2 Feb 08:00 – 09:25; 13:30 – 14:55; 16:30 – 18:00
- Sat, 3 Feb 08:00 – 09:25; 11:00 – 12:30; 13:30 – 14:55

**Location:** Lecture Room (Hall 6) – Level 0

**Description:** The 7 lecture sessions are 1h25min sessions in a traditional lecture format but always ending or allowing for plenty of discussion on the topic selected. Its objective is to thoroughly present and review an important theme in CMR, with a focus on intermediate and advanced knowledge. The topics selected represent either new fields where CMR is advancing rapidly or key subjects in which CMR has an important role for clinical decision making. The intentions of these sessions are not only to provide the most up-to-date scientific data on each lecture but to allow for key and open questions to be discussed among all participants. Moderators of these sessions are encouraged to promote discussion after each talk or in a round-table debate, whatever fits best each topic. Four of the seven sessions are joint-sessions, expanding the interface of CMR with other clinical or imaging specialties.

**Who should attend:** All delegates

7. Short Lectures (SL1 – SL5)

**Dates and Times:**
- Thu, 1 Feb 17:15 – 18:00
- Fri, 2 Feb 09:30 – 10:15; 15:00 – 15:45;
- Sat, 3 Feb 09:30 – 10:15; 15:00 – 15:45;

**Location:** Lecture Room (Hall 6) – Level 0

**Description:** These 5 sessions are 45min long sessions with three lectures in each one of them. They also focus on key topics in CMR, but this time with a more closed look at specific CMR-centered themes such as tissue characterization, valvular heart disease, clinical trials in CMR, function and structural analysis and viability. Lecture titles selected by the Program Committee tackle some of the most difficult questions in each topic and are all common problems faced in CMR labs in daily practice.

**Who should attend:** All delegates; focus on novel and advanced questions on routine protocols used in clinical CMR.

8. Cases Sessions (CR1 – CR7)

**Dates and Times:**
- Thu, 1 Feb 15:45 – 17:10
- Fri, 2 Feb 08:00 – 09:25; 13:30 – 14:55; 16:30 – 18:00pm
- Sat, 3 Feb 08:00 – 09:25; 11:00 – 12:30; 13:30 – 14:55

**Location:** Case Room (Hall 8) – Level 0

**Description:** One of the most popular sessions in the last meetings, These 7 sessions will feature seven cases presented in a specific key CMR topic. These were all submitted cases and the selection this year set a very high bar: there is no doubt the cases presented will feature a key unique feature that makes each one of them very special. To introduce and conclude each topic, a speaker was invited to provide a review of the topic of the session, relating to the cases presented but setting a stage to where the current knowledge in CMR stands. In summary, sessions which will give delegates both a review on key aspects on the topic selected as well as an opportunity to share with presenters the angst and difficulties of coming by special imaging characteristics.

**Who should attend:** All delegates; rare/unusual cases with differential diagnosis discussions balanced with cases in which CMR helped find the diagnosis or provided unique imaging features.

9. Didactic Case Sessions (DC1 – DC5)

**Dates and Times:**
- Thu, 1 Feb 17:15 – 18:00
- Fri, 2 Feb 09:30 – 10:15; 15:00 – 15:45;
- Sat, 3 Feb 09:30 – 10:15; 15:00 – 15:45;

**Location:** Case Room (Hall 8) – Level 0

**Description:** These new sessions will be presented by mentor-fellow pairs, and focus on common clinical topics, discussing routine approaches and insights into emerging approaches that address key problems. There will be 5 sessions, each with 2 cases per session with plenty of time for discussions and audience participation. The idea of the session in general is to present common clinical cardiovascular problems/challenges, discussing the assessment with different imaging modalities and the particular value of CMR in the work-up. Additionally, an insight into state-of-the-art techniques can be discussed. to extend their practice.

**Who should attend:** All delegates; focus on problem-based learning with step-by-step resolution of each case and audience discussion; it is envisaged that this session will be useful for both routine clinical CMR practitioners and those looking to extend their practice.

10. Oral Abstract sessions (OA1 – OA7)

**Dates and Times:**
- Thu, 1 Feb 15:45 – 17:10
- Fri, 2 Feb 08:00 – 09:25; 13:30 – 14:55; 16:30 – 18:00
- Sat, 3 Feb 08:00a – 09:25; 11:00 – 12:30; 13:30 – 14:55

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SESSIONS AND TRACKS DESCRIPTION

Location: Room 4 (room 113) – Level 1

Description: The sessions will present the most recent scientific discoveries in the CMR field. These abstracts represent the cutting-edge knowledge in CMR and are divided in 7 sessions. Three of these sessions will feature the highest quality abstracts presented by Early Career members who qualified for the awards in Basic, Translational and Clinical areas. The other four sessions represent key themes in CMR and will also display the most recent advances in their topics. Each abstract presentation will be followed by a chance for questions and discussion of the data presented, moderated by two experts in the field. These sessions intend to show us where the field is guided to.

Who should attend: All delegates; specific questions will be responded and debates promoted.

11. Special Sessions

Dates and Times:
Thu, 1 Feb 17:15 – 18:00 (2 parallel sessions)
Fri, 2 Feb 09:30 – 10:15; 15:00 – 15:45;
Sat, 3 Feb 15:00 – 15:45 (2 parallel sessions)

Location: Room 4 (room 113) and Room 5 (room 114) – Level 1

Description: There will be 6 sessions which were named as “Special Sessions” as they intend to promote the discussion of a selected question or theme in different ways. Three of these sessions are organized as debates, with moderators and invited speakers engaging in answering specific questions posed by the Program Committee with the possibility of using a supporting presentation. The other three have been organized as traditional lectures but also with the focus on answering practical daily questions. Independently of their format, the main objective of these sessions is that the question posed in the title of each topic is answered by the Faculty Members and that delegates can interact and engage in the discussion.

Who should attend: All delegates; specific questions will be responded and debates promoted.

12. Focus Sessions

Dates and Times:
Thu, 1 Feb 15:45 – 17:10
Fri, 2 Feb 08:00 – 09:25; 13:30 – 14:55; 16:30 – 18:00
Sat, 3 Feb 08:00 – 09:25; 11:00 – 12:30; 13:30 – 14:55

Location: Room 5 (room 114) – Level 1

Description: These 7 sessions complement the oral abstract portion of the program with the presentation of high quality abstracts selected to cover a specific key topic for the program. These topics were chosen as they pose specific needs of the CMR community or represent important clinical aspects found in routine scanning. They include making CMR faster and easier, acute coronary syndromes, functional analysis, normal limits, right ventricle evaluation, coronary imaging and implementing a CMR program. To introduce each topic, a carefully selected lecture was chosen, setting the stage for the following abstracts which will then advance the field or respond to some questions presented previously. The objective of these sessions is to give delegates a review on the subject and, at the same time, a direction to where current developments are pointing in these key topics.

Who should attend: All delegates; focus on novel scientific advances in selected topics

13. Interventional Course

Dates and Times: Thu, 1 Feb 15:00 – 19:00

Location: Room 6 (room 115) – Level 1

Description: The main objective of this course is to discuss this theme among different specialized groups throughout the world, from basic case examples to more advanced views on devices, imaging techniques and procedures. The course starts with moderated case discussions, goes on to a description of MRI catheterization techniques which involve some intervention (stress, NO, exercise, etc) and finalizes with lectures on present and future of devices. This year, the course was moved inside the program instead of being placed as a pre-conference in order to avoid overlap with other sessions that might be of interest to the same delegates.

Who should attend: CMR professionals interested in learning about interventional CMR, whether they already practice or intend to start a program; both adult and pediatric topics will be covered.

14. Non-Cardiologist Course

Dates and Times: Thu, 1 Feb 15:00 – 19:00

Location: Tech Room (room 116) – Level 1

Description: This course intends to provide all non-Cardiologists in the meeting with the key knowledge in this clinical area that interfaces with other areas of CMR. It starts by reviewing basic aspects of cardiological anatomy, function and physiology and advances through the main elements of common diseases studied in CMR such as atherosclerosis, ischemic heart disease, cardiomyopathies, valvular heart disease and congenital heart disease. Finally, basic treatment guidelines are presented for CAD, heart failure and valve disease. All topics are given by expert clinical professionals and should provide a robust basis to understand the most relevant clinical aspects of cardiovascular disease that will ease understanding of why certain aspects of CMR are performed. This year, the course was moved inside the program instead of being placed as a pre-conference in order to avoid overlap with other sessions that might be of interest to the same delegates.

Who should attend: Radiologists, Engineers, Physicists, non-MDs interested in learning more about basic cardiovascular concepts and diseases fundamental to CMR overall knowledge.
SESSIONS AND TRACKS DESCRIPTION

15. Early Career Plenary
**Dates and Times:** Thu, 1 Feb 18:05 – 19:10
**Location:** Plenary Room (rooms 111+112) – Level 1

**Description:** This special plenary will present early career delegates to special opportunities that both EACVI and SCMR provides through their HIT and Early Career Task Force programs. It will also promote a debate with senior faculty members regarding challenges and opportunities for practicing CMR in different settings and backgrounds. Finally, the session will end the presentation of the Travel Award Grant Winners and the SCMR’s Seed Grants, followed-up by a small reception and gathering to enjoy the evening.

**Who should attend:** Early career delegates and other members wanting to learn about career paths and opportunities.

16. Pediatric/Congenital Dedicated Track
**Dates and Times:** Fri, 2 Feb 08:00 – 18:00
**Location:** Room 6 (room 115) – Level 1

**Description:** On Friday, room #6 will host a full program just for the congenital/pediatric topics. This dedicated track adds to an informal track along the meeting where delegates interested in this particular theme will have almost always a session available to go to. In the case of the Friday program, these sessions will host the oral abstract presentations and lectures dedicated to more intermediate to advanced discussions. It is intended to be the part of the meeting where one can really dive in the specific knowledge in this particular area of CMR. On Thursday and Saturday, other sessions will complement this dedicated track with case sessions, didactic cases and the pediatric/congenital portion of the technologist’s track.

**Who should attend:** Delegates interested in intermediate and advance discussions on pediatric and congenital CMR, either enhancing their current knowledge or improving from the basic pediatric/congenital pre-conference.

17. Technologist Track
**Dates and Times:** Fri, 2 Feb 8:00 – 18:00; Sat, 3 Feb 8:00 – 15:45
**Location:** Tech room (room 116) – Level 1

**Description:** This two-day program is a full meeting within CMR2018’s program itself. While keeping the traditional name, the track incorporates a full course on CMR from the basic methods and how-to, going over technical discussions based on disease classification, electrophysiology (in a Joint Session with the Heart Rhythm Society), oncology and pediatric/congenital heart disease. Lectures will be a mix between handling daily programing of the scanner all the way to handling special situations and cases, and what to focus on the acquisition of CMR images.

18. Quick Fire Sessions (1-3)
**Dates and Times:**
Fri, 2 Feb 09:30 – 10:15; 15:00 – 15:45
Sat, 3 Feb 09:30 – 10:15

**Location:** Room 4 (room 113) – Level 1

**Description:** These sessions have the goal of condensing together an overview of the best poster abstracts submitted to the meeting. Each oral session will feature 12 abstract presentations in which presenters will summarize their work in 3-minute key points. After each session, a traditional poster presentation will follow where delegates can then reach each presenter and expand on the main items shown during the quick-fire. A very effective way to gain the most information on novelty aspects of CMR in the least amount of time.

**Who should attend:** All delegates, members and non-members.

19. Level I Track
**Dates and Times:** Thursday, Friday and Saturday
**Location:** Multiple sessions/locations

**Description:** Level I certification will be provided by both societies during the event. Please check the specific rules for obtaining this certification in the app or website. Sessions spread throughout the three days of the main program will count towards obtaining your certification so please remember to register in these sessions. During most sessions, two options will be identified as Level I track at the same time so delegates can choose which ones they prefer. The contents of these sessions were identified as being the most representative for beginner and intermediate delegates entering the world of CMR.

**Who should attend:** All pre-registered delegates pursuing Level I Certification from EACVI or SCMR.

20. SCMR and EuroCMR EACVI Assemblies
**Dates and Times:** Fri, 2 Feb 11:00 – 11:40
**Location:** Lecture Room – Level 0

**Description:** The assemblies for both societies are a time in the program to learn more about the innumerable characteristics of both EuroCMR section of EACVI and SCMR. In this special session, the societies will highlight some of their numbers, the main activities being offered by the different committees and task forces as well as opportunities that new members might seek to be an active part of either groups. If you are a member or want to learn more, this portion of the program is the place to understand what EuroCMR and SCMR are all about.

**Who should attend:** All delegates, members and non-members.
## SESSIONS AND TRACKS DESCRIPTION

### 21. Invasive Live Case

**Dates and Times:**
Fri, 2 Feb 11:40 – 12:25

**Location:** Plenary Room (rooms 111+112) – Level 1

**Description:** Delegates will have the opportunity to watch a live transmission of an invasive CMR procedure performed by one of the top centers in the world directly from King’s College London. The moderators in Barcelona will guide us through the nuts and bolts of how an actual invasive CMR exam is performed while delegates can watch as the case is done online. A very interesting complement to the Interventional Course and other interesting interventional sessions along the meeting in this exciting field.

**Who should attend:** All delegates

### 22. Outreach Session

**Dates and Times:**
Sat, 3 Feb 8:00 – 12:30

**Location:** Plenary Room (rooms 111+112) – Level 1

**Description:** As the name implies, this session provides and interface between the CMR community and other specialties and societies. The four topics selected provide delegates with a chance of listening to how CMR extends to clinical practice in forefront areas. Outcomes research and participation of CMR in guidelines starts the program, followed by the use of CMR in ischemic heart disease in light of other modalities, moves to diagnosing inflammatory heart disease in multisystem diseases and ends with examples of CMR use in population based studies and big data. A whole morning with cutting-edge presentations that highlight and summarize CMR2018’s theme of “Improving Clinical Value by Technical Advances”

**Who should attend:** All delegates

### 23. Best of Moderated ePosters

**Dates and Times:**
Sat, 3 Feb 13:30 – 14:55

**Location:** Room 6 (room 115) – Level 1

**Description:** After the 12 presentations in each topic in the Exhibition Hall, the best poster in each group will be asked to be presented one more time now against each other competing for the Best Moderated Poster Award. A new set of judges will moderate the presentations and have the task of selecting the best poster to be presented in the Closing Plenary. This session will highlight very high quality presentations that were selected first from their original submissions and secondly after a second round in the ePosters presentations.

**Who should attend:** All delegates

### 24. Best SCMR Case of the Week

**Dates and Times:**
Sat, 3 Feb 15:00 – 15:45

**Location:** Room 6 (room 115) – Level 1

**Description:** SCMR hosts in its website cases submitted on a routine basis that are published online after peer-review. Each year, the best cases are voted by the reviewers and the top 5 are selected to participate in a special session where they are presented orally for the selection of the Best Case of the Week. The five cases selected this year have very special teaching points and represent very well the objectives of the online cases. A great way to end the presentation of cases in the meeting in an entertaining and educational competition.

**Who should attend:** All delegates

### 25. Closing Plenary (including OSCARS Session)

**Dates and Times:** Sat, 3 Feb 16:30 – 18:30

**Location:** Plenary Room (rooms 111+112) – Level 1

**Description:** The farewell session of CMR2018 includes different special items that make this plenary unique and provides delegates take-home key messages from the meeting. It starts with the EACVI keynote lecture on “Myocardial plasticity, adaptation and maladaptation: insights from CMR”. Followed by this lecture, the friendly competition between top CMR practitioners takes place in the renovated CMR Oscars – the Image Competition. This year will feature North versus South competitors from different places of the world to face the exquisite questions prepared by our hosts. Finally, the session ends with the top highlights of the meeting presented by the Chairs, the Awards ceremony which will announce the winners of the abstract awards and SCMR Gold Medal Award and the final remarks from SCMR/EuroCMR.

**Who should attend:** All delegates

### 26. Exhibition and Product Theater

**Dates and Times:** Thursday, Friday and Saturday

**Location:** Exhibition Hall – Level 0

**Description:** The exhibitors will showcase the best of their products in Level 0 just outside the Lecture and Case rooms. 18 companies will be present in this floor space allowing delegates to learn about the latest commercial features in CMR products. Along with the Exhibition Hall, special events will take place in the Product Theater, located just along the Poster area. In the Product Theater, exhibitors have prepared feature presentations that highlight important details on specific areas of CMR and will allow delegates to learn more about how their products may help solve daily practical problems in the scanner and in post-processing solutions.

**Who should attend:** All delegates
ABOUT THE EACVI

The EACVI at a glance

The European Association of Cardiovascular Imaging (EACVI), a registered branch of the European Society of Cardiology, is a unified vibrant community comprising four imaging modalities (Echocardiography, Cardiovascular Magnetic Resonance, Nuclear Cardiology and Cardiac Computed Tomography).

Our world leading community of some 10,000 cardiovascular imaging experts includes cardiologists, sonographers, nurses, basic scientists and allied professionals.

Our mission
To promote excellence in clinical diagnosis, research, technical development and education in cardiovascular imaging.

Our Values
We are committed to maintaining the highest standards of professional excellence in all cardiovascular imaging modalities, by providing an innovative educational platform. We are research focused to meet the needs and expectations at any stage of our member’s careers.
ABOUT THE EACVI

The EACVI products

Congresses and events

• EuroEcho-Imaging 2018: 5-8 December 2018, Milan - Italy
• EuroCMR 2019: 2-4 May 2019, Venice - Italy
• ICNC 2019: 12-14 May 2019, Lisbon - Portugal

Educational products

• We offer a wide range of educational products in all imaging modalities both online and in the form of face-to-face events.
• Training and research grants as well as individual certification programmes in CMR, Echocardiography, Nuclear Cardiology and Cardiac CT are also available.

Learn more at www.escardio.org/EACVI

Publications

Stop by the EACVI stand and buy your copies.*

• Books
  - Textbook on Echocardiography – second edition
  - Echo Handbook
  - Upcoming: Textbook on CMR Pre-order form available.

• Abridged recommendations
  9 titles available including some in Spanish, French, Portuguese and Chinese.

• CMR Pocket Guides
  - Congenital Heart Disease
  - Physics for Clinicians

* Exclusive discounts for Silver and Gold EACVI members.

Free samples of the European Heart Journal – Cardiovascular Imaging (EHJ - CI), the EACVI’s official journal, are available at the EACVI stand during CMR 2018. EHJ – CI 2017 impact factor: 5.99.
EACVI SILVER MEMBERSHIP
for 100€
only during the congress

*Instead of 156€ for the 2018 membership. Restricted to paying CMR2018 delegates. Not applicable to day ticket holders.

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Emanuela Valsangiacomo Buechel
Cristina Basso
Victor Ferrari

Published in partnership with the European Association of Cardiovascular Imaging and written by a team of expert authors, this textbook is fully aligned with the ESC Core Curriculum and EACVI Core Syllabus on CMR.

• Takes a practical, disease-oriented approach with treatment of congenital heart disease and GUCH throughout
• Beautifully illustrated, and physical principles are enriched with schematic animations
• Online access to the digital version is included with purchase of the print book, with accompanying videos referenced within the text available on Oxford Medicine Online
• The digital version is updated twice a year to reflect the latest clinical practice guidelines and research evidence

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EACVI
European Association of Cardiovascular Imaging
European Society of Cardiology
ABOUT SCMR

WHO WE ARE:

The Society for Cardiovascular Magnetic Resonance (SCMR) is the recognized representative and advocate for physicians, scientists, and technologists who work in the field of cardiovascular magnetic resonance (CMR). SCMR is the principal international, independent organization committed to the further development of CMR through education, quality control, research, and training.

MISSION:

To improve cardiovascular health by advancing the field of CMR. We accomplish our mission through education, advocacy, networking, research and clinical excellence.

VISION:

The expanded recognition and utilization of CMR will improve cardiovascular health and outcomes.

SCMR is continually developing new benefits and educational programs designed to meet the needs of members. Join with over 2,600 professionals from around the world and take advantage of SCMR’s membership benefits:

• Discount to attend the Annual Scientific Sessions.
• Discounted article submissions to the open access Journal of Cardiovascular Magnetic Resonance.
• Discount to attend the SCMR Workshops.
• Reduced price to obtain SCMR Letter of Certification.
• Access to online learning portal (some courses offered to members only).
• Free downloads of resources for professionals new to CMR, patients, referring providers, and technologists (some resources available to members only).
• Eligible to receive SCMR supported awards, scholarships and grants (members only).
• Stay informed of latest CMR news, guidelines and position papers, and Cases of the Week.
• Ability to network top experts in the field and search the membership directory.
• SCMR advocates key issues on behalf of members, patients and supports Working Groups by specialty and region.

Visit SCMR.org to become a member and stay up-to-date on all SCMR activities.
“Pop heArt”

Rohin Francis

Royal Free Hospital, London
2018 SCMR GOLD MEDAL AWARD

The Board of Trustees of the Society for Cardiovascular Magnetic Resonance is pleased to announce the 2018 Gold Medal Award recipient is Andrew E Arai, MD, FAHA, Chief, Advanced Cardiovascular Imaging Group at National Heart, Lung and Blood Institute, National Institutes of Health. This award is presented annually by the SCMR for outstanding achievement in the field of CMR as well as exemplary service to the Society.

Dr. Arai has been deeply involved in SCMR for more than a decade. He began Board service in 2006, served as Program Chairman for the 13th Annual Meeting in 2010, and ultimately was elected President in 2012, where he lead the Society through a challenging time period, while leaving it substantially for the better. Dr. Arai has also been instrumental in furthering CMR recognition by serving on leadership positions within the American College of Cardiology, American Heart Association, and the Cardiac MRI Study Group of the International Society of Magnetic Resonance in Medicine.

Dr. Arai has also been a distinguished leader developing new MRI techniques for cardiac imaging including determination of extracellular volume fraction and quantitative myocardial perfusion, and bringing recognition of the clinical applications of CMR across the spectrum of disease processes including left ventricular remodeling, myocardial ischemia and infarction, and the use of CMR in evaluating patients with chest pain presenting to the emergency department.

Dr. Arai and his team have been robust leaders and contributors to multiple, large, multicenter trials that have been critical in advancing the broad, clinical use of CMR techniques, and elevating CMR’s diagnostic and prognostic role. Finally, Dr. Arai has a strong track record of mentoring a large number of CMR clinician researchers, many of whom have gone on to establish highly productive and widely recognized careers and CMR centers of their own.
1. Download the eventScribe® App

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https://tinyurl.com/CMR2018
### WEDNESDAY 31 JANUARY - PROGRAMME AT A GLANCE

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WEDNESDAY 31 JANUARY

08:00 – 10:00
SCMR/ISMRM Workshop Session 1
A joint session with the International Society for Magnetic Resonance in Medicine

Physiologic and pathophysiologic regulation of coronary circulation

Chairs: Peter Kellman, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)  
       Sebastian Kozerze, PhD (ETH Zurich)

08:00 - 08:05  Welcome address
Peter Kellman, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)

08:05 - 08:10  Welcome address
Sebastian Kozerze, PhD (ETH Zurich)

08:10 - 08:30  Coronary artery and microvascular disease
Colin Berry, PhD FRCP (University of Glasgow)

08:30 - 08:50  Coronary circulation and microcirculation
Maria Siebes, PhD (University of Amsterdam)

08:50 - 09:10  Biological mechanisms of Coronary Disease
Christian Matter, Prof. (University Hospital Zurich)

09:10 - 09:30  Current status and where we fall short
Eike Nagel (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)

10:00 – 12:00
SCMR/ISMRM Workshop Session 2
A joint session with the International Society for Magnetic Resonance in Medicine

Perfusion Imaging

Chairs: Michael Salerno, MD, PhD (University of Virginia Health System)  
       Behzad Sharif, PhD (Cedars-Sinai Medical Center, Los Angeles)

10:00 - 10:20  How perfusion is done currently and current technical problems?
Tim Leiner, MD, PhD (Utrecht University Medical Center)

10:20 - 10:40  Dark rim artifacts
Behzad Sharif, PhD (Cedars-Sinai Medical Center, Los Angeles)

10:40 - 11:00  Acquisition strategies and k-space sampling
Michael Salerno, MD, PhD (University of Virginia Health System)
WEDNESDAY 31 JANUARY

11:00 - 11:20  Ungated perfusion acquisition
Edward DiBella, PhD (University of Utah)

11:20 - 11:30  Discussion

11:30 - 11:40  Steady-State Pulsed Arterial Spin Labeling Is Faster and Provides Lower Variability for Quantification of Myocardial Perfusion Reserve in Mice Compared to Flow Alternating Inversion Recovery Look-Locker ASL
Sophia Cui, B.S. (University of Virginia)

11:40 - 11:50  Ultra-high spatial resolution spiral myocardial perfusion imaging with whole heart coverage at 3T
Yang Yang, PhD (University of Virginia)

11:50 - 12:00  Simultaneous Multi Slice (SMS) SSFP first pass myocardial perfusion at 1.5 Tesla
Muhammad Sohaib, MBBS, MRCP (St. Thomas’ Hospital, London; King’s College London)

13:00 – 15:00  SCMR/ISMRM Workshop Session 3
A joint session with the International Society for Magnetic Resonance in Medicine

Perfusion Quantification and Models

Chairs: Karl Kunze, MSc (TU Munich)
        Tobias Schaeffter (Physikalisch-Technische Bundesanstalt)

13:00 - 13:15  Arterial Input Function
Peter Kellman, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)

13:15 - 13:30  Input function delay estimation
Michael Jerosch-Herold, PhD (Harvard Medical School)

13:30 - 13:45  Tissue models
D. Broadbent, MSc (Leeds Teaching Hospitals NHS Trust)

13:45 - 14:00  Other Tissue Parameter Estimates (MBV, PS, ECV)
Hui Xue, PhD (National Heart, Lung, and Blood Institute)

14:00 - 14:15  Extracellular Volume
Karl Kunze, MSc (TU Munich)

14:15 - 14:30  Combining T1 mapping and first-pass perfusion measurements for improved estimation of model parameters
Edward DiBella, PhD (University of Utah)

14:30 - 14:45  Computer simulation of cardiac perfusion
Andrew Cookson, MA (Cantab), PhD (University of Bath)

14:45 - 15:00  Discussion
WEDNESDAY 31 JANUARY

15:30 – 17:40
SCMR/ISMRM Workshop Session 4
A joint session with the International Society for Magnetic Resonance in Medicine

Non Contrast Methods

Chairs: Rohan Dharmakumar, PhD (Cedars-Sinai Medical Center)
        Krishna Nayak, PhD (University of Southern California)

15:30 - 15:45  Blood Oxygen Level Depend (BOLD)
                Debiao Li, PhD (Cedars-Sinai Medical Center)

15:45 - 16:00  Arterial Spin Labeling (ASL)
                Krishna Nayak, PhD (University of Southern California)

16:00 - 16:15  Native T1
                Vanessa Ferreira, MD, DPhil (University of Oxford)

16:15 - 16:30  Intravoxel Incoherent Motion Imaging (IVIM)
                Magalie Viallon, PhD Dr (CREATIS UMR CNRS 5220 - INSERM U1206/ Hopital Universitaire de
                Saint-Etienne)

16:30 - 16:45  CO2 challenge
                Rohan Dharmakumar, PhD (Cedars-Sinai Medical Center)

16:45 - 17:00  Discussion

17:00 - 17:10  Preliminary Comparison between Intravoxel Incoherent Motion (IVIM)
                imaging with Quantitative Myocardial First Pass Perfusion (FPP) and Extracellular Volume
                (ECV) Mapping
                Christopher Nguyen, PhD (Cedars-Sinai Medical Center)

17:10 - 17:20  Cardiac fMRI - A new approach for identifying myocardial oxygenation changes in the heart
                with unprecedented confidence
                Hsin-Jung Yang, PhD (Cedars-Sinai Medical Center)

17:20 - 17:30  Quantification of Native T1 Rest/Stress Reactivity without T1 Mapping: Towards a Noncon-
                trast Surrogate Marker of Myocardial Blood Volume Reserve Using a Novel Gradient-Echo
                Hybrid 2D/3D Acquisition Scheme
                Behzad Sharif, PhD (Cedars-Sinai Medical Center)

17:30 - 17:40  Magnifying Myocardial BOLD Sensitivity Through Time-Resolved Imaging
                of Regadenoson Pharmacokinetics
                Hsin-Jung Yang, PhD (Cedars-Sinai Medical Center)
WEDNESDAY 31 JANUARY

17:40 – 19:00
SCMR/ISMRM Workshop
A joint session with the International Society for Magnetic Resonance in Medicine

Poster viewing and welcome drink

WP01 CMR Strain Analysis during Breathing Maneuvers for the Detection of Single Vessel Coronary Artery Disease
Mohamad Rabbani, B.Sc., MDCM Candidate (McGill University)

WP02 Coronary Endothelial Function Testing using Continuous Cardiac ASL-CMR
Ahsan Javed, MS (University of Southern California)

WP03 Development of a stress-only perfusion gradient marker for detection of coronary microvascular dysfunction in women with no obstructive CAD: a new quantitative approach validated by invasively measured coronary reactivity
Zulma Sandoval, PhD (Cedars-Sinai Medical Center, Los Angeles)

WP04 Myocardial infarction with normal coronary arteries by coronary angiography and the relevance of cardiac magnetic resonance for its diagnostic classification.
Guadalupe Pérez Quintana, MD (Instituto Nacional de Cardiología Ignacio Chávez)

WP05 Optimal Flip Angle for Steady Pulsed Arterial Spin Labeled CMR
Hung Do, PhD (University of Southern California)

WP06 Robust motion correction of myocardial perfusion MRI data
Cian Scannell, BSc, MRes (King’s College London)

WP07 The Global Myocardial Oxygenation Response to Breathing Maneuvers is Reduced in a Non-Selective Cohort of Patients with Coronary Artery Disease
Giulia Vinco, MD (McGill University Health Centre, University of Verona)

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08:00 - 09:55  
**SCMR/ISMRM Co-Provided Workshop**  
*A joint session with the International Society for Magnetic Resonance in Medicine*

**Independent Validation**

**Chairs:**  
Amedeo Chiribiri, MD, PhD (King’s College London)  
Juerg Schwitter, 1) Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland. (1) Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland.)

08:00 - 08:15  Microspheres as a myocardial perfusion reference standard  
Anthony Aletras, PhD (Aristotle University of Thessaloniki/Lund University)

08:15 - 08:30  PET/MR  
Henrik Engblom, MD, PhD (Lund University, Skane University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

08:30 - 08:45  CMR Coronary Sinus Flow  
RaquelThemudo, MD, PhD (Department of Clinical Physiology, Karolinska Institutet and Karolinska University Hospital)

08:45 - 09:00  Cath correlation, CFR, FFR, & IMR  
Tushar Kotecha, MRCP(UK) MBChB (Royal Free London NHS Foundation Trust)

09:00 - 09:15  Phantom studies  
Amedeo Chiribiri, MD, PhD (King’s College London)

09:15 - 09:25  Simultaneous quantitative myocardial perfusion with hybrid PET-MRI imaging in a 3D printed phantom using gadolinium contrast and 13-N Ammonia  
Muhummad Sohaib Nazir, MBBS, MRCP (St. Thomas’ Hospital, London; King’s College London)

09:25 - 09:35  Pattern of ischemic injury is modulated by coronary architecture: A quantitative CMR study  
Nilesh Ghugre, PhD (Sunnybrook Research Institute, University of Toronto)

09:35 - 09:45  Splenic T2-Mapping: a Novel Method for the Assessment of Splenic Blood Flow during Adenosine Stress  
Tommaso D'Angelo, MD (University of Messina)

09:45 - 09:55  Quantitative perfusion in patients at high risk of coronary artery disease  
Kristopher Knott, MBBS, MA (University College London)
THURSDAY 1 FEBRUARY

08:00 - 09:15
Pediatric/Congenital Preconference

Pediatric/Congenital Basics

Chairs: Arno Roest (Leiden University Medical Center)
Gerald Greil, MD, PhD (UT Southwestern/Children’s Medical Center Dallas)

08:00 - 08:15 Function and Flow- Protocols: How to acquire, postprocessing tips and pitfalls
Arno Roest (Leiden University Medical Center)

08:15 - 08:30 Function and Flow- Making sense of the numbers: Complex Flow Calculations
Rajesh Puranik, Prof (University of Sydney)

08:30 - 08:45 Anatomy: What's in my toolbox?
Christian Kellenberger, MD (Diagnostic Imaging, University Children’s Hospital Zurich, Switzerland)

08:45 - 09:00 CMR- Safe environment for Children?
Wendy Norman, DCR(R), DRI (Institute of Cardiovascular Science, University College London)

08:00 - 09:15
Physician’s Preconference

Basics of MRI

Chairs: Robert Edelman, MD (NorthShore University HealthSystem)
Michael Schär, PhD (Johns Hopkins University)

08:00 - 08:12 Key hardware components: What’s inside?
Walter Witschey, PhD (Perelman School of Medicine, University of Pennsylvania)

08:12 - 08:24 MRI Safety: magnetic field biologic effects, precautions and implications for magnet set-up, device safety
Oliver Speck (Otto-von-Guericke University)

08:24 - 08:36 MR Physics Part 1: basic concepts, signal spatial encoding, basic pulse sequences
Gerhard Laub, (Dr. Laub Consulting LLC)

08:36 - 08:48 MR Physics Part 2: Advanced and fast pulse sequences and parallel imaging
Anthony Aletras, PhD. (Aristotle University of Thessaloniki/Lund University)

08:48 - 09:00 Gadolinium: Principles of contrast enhancement and patient safety
David Bluemke, MD, PhD (University of Wisconsin School of Medicine and Public Health)

09:00 - 09:15 Discussion
THURSDAY 1 FEBRUARY

09:30 - 11:00
Pediatric/Congenital Preconference

Acquired Pediatric Heart Disease

Chairs: Michael Taylor, MD, PhD (Cincinnati Children’s Hospital Medical Center)
       Benedetta Leonardi, Dr. (Pediatric Hospital and Research Institute Bambino Gesù)

09:30 - 09:45 Nonischemic cardiomyopathies
       Michael Taylor, MD, PhD (Cincinnati Children’s Hospital Medical Center)

09:45 - 10:00 Myocarditis and pericardial disease
       Puja Banka, MD (Boston Children’s Hospital)

10:00 - 10:15 Vascular Disease: Kawasaki and other systemic vascular disorders
       Lorna Browne, MD (Children’s Hospital Colorado)

10:15 - 10:30 Post-transplant evaluation
       Craig Butler, MD, MSc, FRCPC (Mazankowski Alberta Heart Institute)

10:30 - 10:45 Cardiac Tumors in Children
       Rebecca Beroukhim, MD (Massachusetts General Hospital)

09:30 - 10:50
Physician’s Preconference

CMR Applications 1

Chairs: Stefan Zimmerman, MD (Johns Hopkins University School of Medicine)
       Michael Atalay, Michael (Alpert Medical School at Brown University)

09:30 - 09:42 Ventricular and atrial function - technical methods
       Alicia Maceira, MD, PhD, FESC (ERESA Medical Group / CEU Cardenal Herrera University)

09:42 - 09:54 Ventricular and atrial function - How To
       Eylem Levelt, MBBS, DPhil (University of Leicester)

09:54 - 10:06 CMR Stress Imaging - technical methods
       Edward DiBella, PhD (University of Utah)

10:06 - 10:18 CMR Stress Imaging - How To
       Manish Motwani, MB ChB, PhD (Manchester Heart Centre)

10:18 - 10:30 Tissue characterization: contrast enhanced techniques - technical methods
       Carlos Rochitte, MD PhD (Heart Institute, InCor, University of São Paulo Medical School and
       Heart Hospital, HCOR)

10:30 - 10:42 Tissue characterization: contrast enhanced techniques - How To
       Robert Manka, MD (University Hospital Zürich and ETH Zürich)

10:42 - 10:50 Discussion
## THURSDAY 1 FEBRUARY

### 10:30 - 12:00

**SCMR/ISMRM Co-Provided Workshop**

*A joint session with the International Society for Magnetic Resonance in Medicine*

**Open Questions in Ischemic Heart Disease**

*Chairs:*  
Subha Raman, MD, MSEE (The Ohio State University)  
James Moon, MD (UCL)

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Juerg Schwitter (University Hospital of Lausanne, CHUV, Switzerland) |
| 10:45 - 11:00 | How to monitor effective stress? is splenic cut-off reliable?  
James Moon, MD (UCL) |
| 11:00 - 11:15 | How to standardize measurements, display, and reporting?  
Carlos Rochitte, MD PhD (Heart Institute, InCor, University of São Paulo Medical School and Heart Hospital, HCOR) |
| 11:15 - 11:30 | What are normal & disease values?  
Louise Brown, MBChB, BMedSc (University of Leeds) |
| 11:30 - 11:45 | Exercise vs Pharmacological Stress  
Subha Raman, MD, MSEE (The Ohio State University) |
| 11:45 - 12:00 | Differentiating between obstructive CAD and microvascular disease  
Ingo Eitel, MD (University Heart Center Lübeck) |

### 11:05 - 12:30

**Physician’s Preconference: CMR Applications 2**

**Physician’s Preconference: Basic CMR and Physics**

*Chairs:*  
Håkan Arheden, MD PhD (Lund University, Skåne University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)  
Niall Keenan, MD(Res) FESC (West Herts NHS Trust)

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Sonia Nielles-Vallespin, PhD, MSc (NIH) |
| 11:17 - 11:29 | T1/T2-weighted and parametric mapping - How To  
Alexander Liu, MBBS BSc (University of Oxford) |
Pim van Ooij, PhD (Amsterdam Medical Center) |
| 11:41 - 11:53 | Vascular imaging: Flow and MRA - How To  
Pierre Croisille, MD PhD (University of Lyon) |
THURSDAY 1 FEBRUARY

11:53-12:05  MRI assessment of valve structure and function - technical methods
Marcus Carlsson, MD, PhD (Lund University, Skane University Hospital)

12:05-12:17  MRI assessment of valve structure and function - How To
Kate Hanneman, MD (University of Toronto)

12:17 - 12:30  Discussion

11:15 - 12:30  Pediatric/Congenital Preconference

Pediatric/Congenital Preconference

Congenital Heart Disease

Chairs:  Adam Dorfman, MD (University of Michigan)
         Sonya Babu-Narayan, FRCP PhD (Royal Brompton Hospital)

11:15 - 11:30  Tetralogy of Fallot
Sonya Babu-Narayan, FRCP PhD (Royal Brompton Hospital)

11:30 - 11:45  Transposition of the Great Arteries: Arterial Switch
Francesca Raimondi, Pediatric Cardiologist (University Paris Descartes, Sorbonne)

11:45 - 12:00  Transposition of the Great Arteries: Atrial Switch
Inga Voges, MD (Royal Brompton)

12:00 - 12:15  Single Ventricle: pre-stage II
Jimmy Lu, MD (University of Michigan)

12:15 - 12:30  Aortic disease
Francesca Pluchinotta, MD (IRCCS Policlinico San Donato, Milan, Italy)

12:00 - 12:30  SCMR/ISMRM Co-Provided Workshop

A joint session with the International Society for Magnetic Resonance in Medicine

Closing Plenary

Chairs:  Peter Kellman, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)
         Sebastian Kozerke, PhD (ETH Zurich)

12:00 - 12:15  Consensus and next steps
Amedeo Chiribiri, MD PhD (King’s College London)

12:15 - 12:30  Panel discussion
THURSDAY 1 FEBRUARY

12:30 - 13:30
Bayer Satellite Symposium

Spotlight on aspects of Gadolinium presence and optimized management of CAD patients with CMR

Chairs: Eike Nagel, MD, PhD (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)

12:35 - 13:00 Presence of Gadolinium in the brain and body - What matters and what do we need to know?
Val Runge, MD (University Institute of Diagnostic, Interventional and Pediatric Radiology)

13:00 - 13:25 Stress perfusion imaging to guide the management of patients with stable coronary artery disease
Eike Nagel, MD, PhD (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)

13:30 - 14:45
Opening Plenary

A joint session with the European Heart Rhythm Association (EHRA)

CMR’s Role in Arrhythmia and Sudden Cardiac Death

Chairs: Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)
Matthias Friedrich, MD (McGill University Health Centre)

13:30 - 13:35 Welcome Address EACVI
Bogdan Popescu, MD, PhD (University of Medicine and Pharmacy ‘Carol Davila’, Institute of Cardiovascular Diseases, Bucharest, Romania)

13:35 - 13:40 Welcome Address SCMR
Matthias Friedrich, MD (McGill University Health Centre)

13:40 - 13:45 CMR2018 Introduction
Juliano Fernandes, MD, PhD (Jose Michel Kalaf Research Institute)
Robin Nijveldt, MD, PhD (Radboudumc)

13:45 - 14:00 Developments in electrophysiology and ventricular arrhythmias
Josep Brugada, (University of Barcelona)

14:00 - 14:15 CMR and the Electrophysiology Community: how can we best help each other?
Antonio Berruezo, MD, PhD (University of Barcelona)

14:15 - 14:30 Lessons from CMR in Sudden Death
Nathaniel Reichek, MD (St Francis HospitalFr) SCMR 2017 Gold Medal Winner

14:30 - 14:45 Update on Imaging of Patients with Arrhythmia and Implantable Devices
Harold Litt, MD-PhD (Perelman School of Medicine of the University of Pennsylvania)
THURSDAY 1 FEBRUARY

15:00 - 16:25
Interventional CMR Course

ICMR Case Discussions

Chairs: Tobias Schaeffter, (Physikalisch-Technische Bundesanstalt, King's College London)
Jaffar Khan, BM BCh (NHLBI, NIH)

15:00 - 15:05 Welcome
Kanishka Ratnayaka, MD (Rady Children’s Hospital)

15:05 - 15:15 ICMR case presentations: pediatric/congenital heart disease
Kuberan Pushparajah, MD (Kings College London and Guy’s & St Thomas)

15:25 - 15:35 ICMR case presentations: adult
Daniel Knight, (UCL Department of CMR, Royal Free Hospital)

15:45 - 15:55 ICMR case presentations: electrophysiology
Philipp Sommer, MD, FHRS, FESC (Heart Center Leipzig)

16:05 - 16:15 ICMR case presentations: lessons from year one
Surendranath Reddy, MD (University of Texas Southwestern Medical Center)

15:00 - 16:15
Non-Cardiologists Course

Anatomy & Physiology

Chairs: Han Kim, MD (Duke University)
Robert Weiss, MD (Russell H. Morgan Department of Radiology and Radiological Science, The Johns Hopkins University School of Medicine, Baltimore, MD, United States)

15:00 - 15:05 Welcome
Han Kim, MD (Duke University)
Robert Weiss, MD (Russell H. Morgan Department of Radiology and Radiological Science, The Johns Hopkins University School of Medicine, Baltimore, MD, United States)

15:05 - 15:20 Anatomy of the heart & great vessels
David Sosnovik, MD (Harvard Medical School - Massachusetts General Hospital)

15:20 - 15:35 Cardiac Function
Lilia Sierra-Galan, MD, MCvT (American British Cowdray Medical Center)

15:35 - 15:50 Coronary Circulation
Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)

15:50 - 16:05 Vascular Physiology
Gregory Lanza, MD PhD (Washington University Medical School)

16:05 - 16:15 Discussion
THURSDAY 1 FEBRUARY

15:00 - 15:45
Moderated ePoster Session 1

EXHIBITION HALL (EPOSTER STATION 1)

Coronary and Vascular Imaging

Chairs: Rene Botnar, PhD (King’s College London)
        Masaki Ishida, MD, PhD (Mie University Hospital)

15:00 - 15:08 Precision and Accuracy of Coronary Cross-Sectional Area MRI Measurements Used to Measure Coronary Endothelial Function
Michael Schär, PhD (Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins University School of Medicine)

15:08 - 15:16 Increased Coronary Vessel Wall Thickness and Association with Myocardial Diastolic Function in Human Immune Deficiency Virus Infection.
Ahmed Hamimi, MD/PhD - FRCR (National Institutes of Health)

Zixin Deng, MS (Cedars-Sinai Medical Center)

15:24 - 15:32 Fully Quantitative 3D Dynamic Contrast Enhanced (DCE) Imaging of Carotid Vessel Wall by Fast T1 Mapping
Nan Wang, M.S. (Cedars-Sinai Medical Center/UCLA)

15:32 - 15:40 Added Value of MRI-based Vascular Calcification Visualization for the Assessment of Lower Extremity Arterial Stenosis in Patients with Peripheral Artery Disease Undergoing Quiescent Interval Single-Shot (QISS) MRA
Akos Varga-Szemes, MD, PhD (Medical University of South Carolina)

15:00 - 15:45
Moderated ePoster Session 2

EXHIBITION HALL (EPOSTER STATION 2)

Non-Ischemic Cardiomyopathy

Chairs: Alessia Pepe, MD, PhD (Fondazione G. Monasterio CNR Regione Toscana)
        Daniel Messroghli, MD (Deutsches Herzzentrum Berlin and Charité University Medicine Berlin)

15:00 - 15:08 Myocardial Fibrosis in Myotonic Muscular Dystrophy: Highly Prevalent But Not Predictive of Pacemaker Implantation
Andrea Cardona, MD (The Ohio State University Wexner Medical Center)

15:08 - 15:16 Long-term longitudinal prospective CMR study in patients with thalassemia major
Alessia Pepe, MD, PhD (Fondazione G. Monasterio CNR Regione Toscana)

15:16 - 15:24 Myocardial Characterization and Strain as a Diagnostic Tool in Anthracycline-Induced Cardiotoxicity: A Preclinical Model
Cory Noel, M.D. (Texas Children’s Hospital - Baylor College of Medicine)
15:24 - 15:32  Effect of lipid storage and left ventricular hypertrophy on systolic strain in Fabry Disease
Antonia Camporeale, MD (IRCCS Policlinico San DOnato)

15:32 - 15:40  Subclinical Fabry Cardiomyopathy
Sabrina Nordin, MRCP (Barts Heart Centre)

15:00 - 15:45  EXHIBITION HALL (EPOSTER STATION 3)
Moderated ePoster Session 3
Cardiac Involvement in Systemic Disease

Chairs:  Erasmo De La Pena-Almaguer, MD (Tecnologico de Monterrey)
         Meng Jiang, Meng (Renji Hospital, Shanghai Jiaotong University)

15:00 - 15:08  T1 mapping in myocardial regions without focal fibrosis in patients with Chagas heart disease
Rodrigo Melo, MD (Heart Institute (InCor), University of Sao Paulo)

15:08 - 15:16  Myocardial inflammation and Edema Revealed by Cardiac Magnetic Resonance in Antiretroviral-Naïve and Antiretroviral-Exposed HIV Patients
Katia Menacho, MD (Barts Heart Centre)

15:16 - 15:24  Detection of myocardial deformation changes assessed by CMR tissue-tracking in patients with acute myocarditis with preserved ejection fraction
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)

15:24 - 15:32  Characterize Ventricular Remodeling Features of Cardiac Sarcoidosis with Magnetic Resonance Imaging
Chenyong Lu, (Lishui Hospital of Zhejiang University)

15:32 - 15:40  Myocardial T1 mapping and Tissue-Tracking Strain Analysis with 1.5T Magnetic Resonance in Patients with Type 2 Diabetes Mellitus
Yukun Cao, (Department of Radiology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology)

15:00 - 15:45  EXHIBITION HALL (ECASE STATION 4)
Moderated eCase Session 1
Ischemic Heart Disease and Acute Chest Pain

Chairs:  Steve Leung, MD (University of Kentucky)
         Joel Wilson, MD (Overlake Hospital Medical Center)

15:00 - 15:08  CMR diagnosis of microvascular dysfunction? It’s all in the map
Tushar Kotecha, MRCP(UK) MBChB (Royal Free London NHS Foundation Trust)

15:08 - 15:16  Incidental dramatic finding with cardiac MRI viability testing: Left Ventricular Free Wall Rupture Missed by Echocardiography
Niels Menck, (HELIOS Klinikum Erfurt)
15:16 - 15:24  Spontaneous coronary artery dissection and Takotsubo cardiomyopathy: MRI demonstration of the underlying mechanism
Antonella Cecchetto, (Ospedale Sacro Cuore Don Calabria - Negrar Verona)

15:24 - 15:32  The other toxic face of cocaine
Estefania De Garate, MD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section) University of Bristol)

15:32 - 15:40  CMR sees everything - the joy of interventional cardiologists
Tobias Fuchs, MD, FESC, FSCCT (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

15:45 - 17:10  Lecture Room
Lecture Session 1
A joint session with the Heart Failure Society of America (HFSA)

Current and Future Perspectives to Improve Patient Care in Heart Failure

Chairs: Daniel Messroghli, MD (Deutsches Herzzentrum Berlin and Charité University Medicine Berlin)
Erik Schelbert, MD, MS (University of Pittsburgh; Heart and Vascular Institute of UPMC)

15:45 - 16:00  New insights into heart failure by magnetic resonance spectroscopy
Giovanni Aquaro, (Fondazione Toscana Gabriele Monasterio, Pisa (Italy))

16:00 - 16:15  The invaluable role of CMR in the differential diagnosis of heart failure
PierGiorgio Masci, PierGiorgio Masci (Centre for Cardiac MR - University Hospital of Lausanne)

16:15 - 16:30  The role of CMR in risk stratification: a myth or or enough evidence?
Sanjay Prasad, MD (Royal Brompton Hospital and Imperial College, London)

16:30 - 16:45  CMR as multiparametric tool to understand the pathophysiology in HFrEF
Andrew Taylor, PhD, M.B., B.S. (Monash University, Melbourne, Australia)

16:45 - 17:00  Future clinical needs from imaging in heart failure
Daniel Messroghli, MD (Deutsches Herzzentrum Berlin and Charité University Medicine Berlin)

17:00 - 17:10  Discussion

15:45 - 17:15  Case Room
Case Session 1
Ischemic Heart Disease and Acute Chest Pain

Chairs: Aloha Meave González, MD (Instituto Nacional de Cardiología Ignacio Chavez)
Gerry McCann, MB ChB, MD (University of Leicester)

15:45 - 15:55  How to Perform CMR in the Acute Chest Pain Scenario
Gianluca Pontone, (Centro Cardiologico Monzino, IRCCs)
THURSDAY 1 FEBRUARY

15:55 - 16:05 Out of Hospital Cardiac arrest in a 14-year-old soccer player: don’t forget the coronaries! 
Alessandra Scatteia, MD (Division of Cardiology, Ospedale Medico-Chirurgico Accreditato Villa dei Fiori, Acerra, Naples, Italy)

16:05 - 16:15 T1 mapping detect distal bed matrix changes in coronary artery lesions’ configuration changes in developing ischemia, a case report
Ahmed Kharabish, MSc, PhD (Bad Krozingen Heart Center, Freiburg University, Germany)

16:15 - 16:25 Is it an aneurysm or a pseudoaneurysm? Does CMR has any special clue to tell us?
Lilia Sierra-Galan, MD, MCVT (American British Cowdray Medical Center)

16:25 - 16:35 Pixel-wise Quantitative Stress Perfusion Imaging of Coronary Microvascular Dysfunction
David Corcoran, MBChB BSc (Hons) (University of Glasgow)

16:35 - 16:45 Acute Right Ventricular Myocardial Infarction Mimicking Anterior Myocardial Infarction characterized by CMR: expected the unexpected
Anna Giulia Pavon, Cardio-Thoracic Vascular Department, San Raffaele Hospital, Milan, Italy (Cardiac MR Center-Cardiologiy Unit-University Hospital-CHUV-Lausanne, Switzerland)

16:45 - 16:55 Chronic Intramyocardial Hemorrhage Detected by T1 and T2 star Mapping after Reperfusion of ST-Segment-Elevation Myocardial Infarction: A Case Report
Yohei Yamauchi (Osaka Medical college)

16:55 - 17:05 Thrombosed Saphenous Vein Graft Aneurysm Mistaken for a Right Atrial Mass
Roshin Mathew, MD (University of Virginia Health System)

17:05 - 17:15 LGE and Beyond: What CMR Adds in the Investigation of Ischemic Heart Disease
Jens Bremerich, MD (University Hospital Basel)

15:45 - 17:10 Oral Abstract Session 1

15:45 - 15:57 Biologic and Prognostic Validation of Delayed Enhancement (DE-) CMR for Cancer-Associated Cardiac Masses – Multimodality Comparison to Positron Emission Tomography (PET)
Angel Chan, MD, PhD (Memorial Sloan Kettering Cancer Center)

15:57 - 16:09 Native myocardial T1 for clinical diagnosis of cardiac amyloidosis: ready for prime time – a 715 patient prospective study
Andrea Baggiano (Centro Cardiologico Monzino, Istituto di Ricovero e Cura a Carattere Scientifico)
THURSDAY 1 FEBRUARY

16:09 - 16:21 Adenosine stress T1-mapping offers a novel gadolinium-free approach for perfusion assessment in hypertrophic cardiomyopathy
Betty Raman, MBBS, FRACP (University of Oxford, Division of Cardiovascular Medicine)

16:21 - 16:33 Combined high-resolution stress perfusion and scar assessment in patients with ischaemic cardiomyopathy
Adriana Villa, MD (King’s College London)

16:33 - 16:45 Coronary Hyper-Intensive Plaques Identified by Coronary Atherosclerosis T1-weighted Characterization Relates to Vulnerable Plaque Features and Clinical Severity in Patients with Acute Coronary Syndrome
Wei Yu, M.D, PhD (Department of Radiology, Anzhen Hospital, Capital Medical University)

16:45 - 16:57 Left atrial ejection fraction: a novel imaging biomarker for diagnosis and prognosis in heart failure with preserved ejection fraction
Prathap Kanagala, MBBS, MRCP (Aintree University Hospital, Liverpool)

16:57 - 17:10 Maldistribution of Pulmonary Blood Flow in Patients After the Fontan Operation Is Associated with Lower Exercise Capacity
Tarek Alaieed, MD, MSc (Boston Children’s Hospital)

15:45 - 17:10
Focus Session 1

ROOM 5

15:45 - 16:00 Accelerating Acquisition and Post-Processing in CMR
Daniel Lee, MD, MSc (Northwestern University Feinberg School of Medicine)

16:00 - 16:10 Automated versus manual valve tracking for assessment of valvular flow and regurgitation with 4D Flow MRI
Jos Westenberg, PhD (Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands)

16:10 - 16:20 Motion-corrected free-breathing LGE delivers superior imaging in half the time: a 400-patient study
Ilaria Lobascio, MD (Barts Heart Centre)

16:20 - 16:30 Functional Late-Gadolinium Enhancement Imaging
Sebastian Weingärtner, PhD. (Electrical and Computer Engineering, University of Minnesota; Center for Magnetic Resonance Research, University of Minnesota; Computer Assisted Clinical Medicine, Heidelberg University)
16:40 - 16:50 Texture analysis applied on cardiac magnetic resonance T1 and T2 mapping in patients with biopsy-proven infarct-like acute myocarditis: initial results
Bettina Baeßler, M.D. (University Hospital of Cologne, Department of Radiology)

16:50 - 17:00 A bi-ventricular atlas for machine learning analysis of Hypertrophic Cardiomyopathy CMRs
Georgia Doumou, MRes (MRC - Clinical Science Centre)

17:00 - 17:10 Automated aorta localization and quality control for cine CMR in the UK Biobank population cohort
Luca Biasiolli, DPhil (University of Oxford)

15:45 - 17:10
Special Course 1
Preparing for Discovery - Session 1

Chairs: Philip Kilner, (Emerson College, UK) James Moon, MD (UCL)

16:25 - 17:50
Non-Cardiologists Course
Pathophysiology

Chairs: Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal) Joao Lima, MD, MBA (Johns Hopkins University)

16:25 - 16:40 Atherosclerosis
Marc Dweck, MD PhD (University of Edinburgh)

16:40 - 16:55 Ischemic Heart Disease
W. Patricia Bandettini, MD (National Heart, Lung and Blood Institute, National Institutes of Health)

16:55 - 17:10 Cardiomyopathy
Sanjay Prasad, MD (Royal Brompton Hospital and Imperial College, London)

17:10 - 17:25 Valvular Heart Disease
João Cavalcante, MD, FACC (University of Pittsburgh/UPMC)

17:25 - 17:40 Congenital Heart Disease
Ruchira Garg, MD FACC FASE (Cedars-Sinai Medical Cente)

17:40 - 17:50 Discussion
THURSDAY 1 FEBRUARY

16:35 - 17:50
Interventional CMR Course

Provocative MRI Catheterization

Chairs: Toby Rogers, BM BCh, PhD (National Heart, Lung and Blood Institute, National Institutes of Health)
Philipp Sommer, MD, FHRS, FESC (Heart Center Leipzig)

16:35 - 16:45 MRI stress catheterization: Fontan
James Wong, MA MRCPCH (King’s College London)

16:45 - 16:55 MRI catheterization with Nitric Oxide
Michael Quail, MD (King’s College London)

16:55 - 17:05 Discussion

17:05 - 17:15 PVR, right heart function with MRI exercise
Guido Claessen, MD, PhD (KU Leuven, Department of Cardiovascular Science)

17:15 - 17:25 MRI stress catheterization: exercise
Toby Rogers, BM BCh, PhD (National Heart, Lung and Blood Institute, National Institutes of Health)

17:25 - 17:35 Magnetic Resonance-Augmented Cardiopulmonary Exercise Testing
Vivek Muthurangu, MD (Institute of Cardiovascular Science, University College London)

17:35 - 17:50 Discussion

17:15 - 18:00
Didactic Case Session 1

MR Incompatible Situations - How do I deal with Renal Failure and Devices?

Chairs: Anna Baritussio, MD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)
David Wendell, PhD (Duke University Medical Center)

17:15 - 17:38 Ferumoxytol MRA for TAVR planning in patients with renal failure
Michael Hope, M.D. (University of California, San Francisco)
Kimberly Kallianos, MD (University of California, San Francisco)

17:38 - 18:00 Maximizing diagnostic yield of cardiac MRI in patients with devices
James Carr, MD (Northwestern University)
Matthew Barrett, MD (Northwestern Memorial Hospital)
THURSDAY 1 FEBRUARY

17:15 - 18:00
Special Session 2

Hypertrophic Heart: CMR for Diagnosis - Discuss with the Experts

Chairs: James White, MD (Libin Cardiovascular Institute, Cummings School of Medicine, University of Calgary)
John Baksi, PhD MRCP (Royal Brompton Hospital and Imperial College London, London)

17:15 - 18:00 Athlete, hypertensive or hypertrophic heart?
Viviana Maestrini, PhD, MD (Sapienza University of Rome)

CMR as first line diagnostic test in children at risk for HCM?
Michael Campbell, MD, MHA (Duke University)

The role of T1 mapping and ECV over LGE in diagnosing HCM
Michael Salerno, MD, PhD (University of Virginia Health System)

Classic risk factors suffice in HCM patients to decide ICD therapy
Rebecca Kozor, PhD (University of Sydney)

17:15 - 18:00
Special Session 1

Parametric Mapping in Pediatric and Congenital Heart Disease

Chairs: Andrew Flett, MBBS, MD (res) (University Hospital Southampton)
Rachel Wald, MD FRCPC (Joint Department of Medical Imaging)

17:15 - 17:30 Parametric Mapping in Pediatrics
Lars Grosse-Wortmann, MD (The Hospital for Sick Children)

17:30 - 17:45 Parametric Mapping in Congenital Heart Disease
Sonya Babu-Narayan, FRCP PhD (Royal Brompton Hospital)

17:15 - 18:00
Short Lecture 1

Tissue Characterization

Chairs: Vanessa Ferreira, MD, DPhil (University of Oxford)
Ingo Eitel, MD (University Heart Center Lübeck)

17:15 - 17:30 Tissue characterization in acute coronary syndromes and myocardial infarction
Colin Berry, PhD FRCP (University of Glasgow)

17:30 - 17:45 Tissue characterization for myocarditis assessment and the new Lake Louise criteria
Aernout Beek, MD, PhD (VU University Medical Center, Amsterdam, The Netherlands)

17:45 - 18:00 Tissue characterization in cardiomyopathies
James Moon, MD (UCL)
**Interventional CMR Course**

**ICMR Imaging & Devices: Present and Future**

**Chairs:**
- Tarique Hussain, MD, PhD (University of Texas Southwestern)
- Graham Wright, PhD (Sunnybrook Research Institute, University of Toronto)

**18:00 - 18:10**  
ICMR with off-the-shelf devices  
Jaffar Khan, BM BCh (NHLBI, NIH)

**18:10 - 18:20**  
MR guided electrophysiology imaging and catheters  
Solenn Toupin, Siemens Healthineers France (Siemens Healthineers France)

**18:20 - 18:30**  
Real-time phase contrast MRI  
Rajiv Ramasawmy, PhD (National Institutes of Health)

**18:30 - 18:40**  
ICMR will enable next stage in structural heart intervention  
Kanishka Ratnayaka, MD (Rady Children’s Hospital)

**18:40 - 18:50**  
ICMR defibrillators  
Ehud Schmidt, PhD (Johns Hopkins University)

**18:50 - 19:00**  
MRI catheterization guidewires  
Peter Ewert, Prof. Dr. (Pediatric Cardiology and Congenital Heart Disease, German Heart Center Munich)

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**Non-Cardiologists Course**

**Therapeutic Concepts**

**Chairs:**
- Dudley Pennell, MD (Royal Brompton Hospital)
- Han Kim, MD (Duke University)

**18:00 - 18:15**  
Treating CAD: drugs, coronary intervention & surgery  
Andreas Kumar, MD, MSc (Northern Ontario School of Medicine)

**18:15 - 18:30**  
Heart failure therapy: drugs and devices  
James White, MD (Libin Cardiovascular Institute, Cummings School of Medicine, University of Calgary)

**18:30 - 18:45**  
Treating valves - surveillance, surgery & transcatheter intervention  
Balaji Tamarappoo, MD, PhD (Cedars Sinai Medical Center)

**18:45 - 19:00** Discussion
THURSDAY 1 FEBRUARY

18:05 - 19:10  Early Career Plenary

**PLENARY ROOM**

Chairs: Matthias Friedrich, MD (McGill University Health Centre)
Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

18:05 - 18:10  EACVI HIT
Anna Baritussio, MD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

18:10 - 18:15  SCMR Early Career Task Force
Akhil Narang, MD (University of Chicago)

18:15 - 18:25  Certification in CMR
Mark Westwood, MBBS MD FRCP FESC (Barts)

18:25 - 18:55  A career as a basic researcher in CMR
Orlando Simonetti, PhD (The Ohio State University)

A Female Radiologist perspective in CMR
Luba Frank, (University of Texas Medical Branch)

Practicing CMR in a clinical academic environment
Vanessa Ferreira, MD, DPhil (University of Oxford)

Should I stay or should I go? International experiences
Steven Chamuleau, MD, PhD (Utrecht University Medical Center)

18:55 - 19:10  Seed Grants and Travel Grants Awards
Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)
Nicole Seiberlich, PhD. (Case Western Reserve University)
Michael Markl, PhD (Northwestern University)

19:10 - 20:00  Welcome drink (in the Exhibition Hall)
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FRIDAY 2 FEBRUARY

08:00 - 09:25
Lecture Session 2
A joint session with the Medical Image Computing Assisted Intervention (MICCAI)

Machine Learning Artificial Intelligence and Post Processing

Chairs: Alistair Young, PhD (University of Auckland, New Zealand)
        Erica Dall’Armellina, MD, DPhil (Leeds Institute of Cardiovascular and Metabolic Medicine, Division of Biomedical Imaging, University of Leeds)

08:00 - 08:15  Machine Learning in Medical Imaging: A sea change?
                Daniel Rueckert, PhD (Imperial College London)

08:15 - 08:30  Cardiac function and computer assisted diagnosis
                Avan Suinesiaputra, PhD (The University of Auckland, New Zealand)

08:30 - 08:45  Deep Learning for CMR
                Tim Leiner, MD, PhD (Utrecht University Medical Center)

08:45 - 09:00  Redefining risk with Artificial Intelligence
                Vicente Grau, PhD (University of Oxford, Oxford, UK)

09:10 - 09:15  Artificial Intelligence and Machine Learning in 4D Flow
                Albert Hsaio, MD, PhD (UC San Diego)

09:15 - 09:25  Discussion

08:00 - 09:30
Case Session 2
Non-ischemic Cardiomyopathies

Chairs: Marianna Fontana, MD, PhD (UCL Department of CMR, Royal Free Hospital)
        Rocio Hinojar, MD (Ramón y Cajal University Hospital)

08:00 - 08:10  Should I Perform Parametric Mapping in All Patients with Non-Ischemic Cardiomyopathies?
                Vanessa Ferreira, MD, DPhil (University of Oxford)

08:10 - 08:20  A Clinical Situation Where Cardiac MRI Made a Difference
                Abdalla Elagha (Cairo university)

08:20 - 08:30  The dissociation between pathological progression and clinical stability: A Case Report of Hypertrophic Cardiomyopathy
                David Wen, (University of Oxford)
                Betty Raman, MBBS, FRACP (University of Oxford, Division of Cardiovascular Medicine)

08:30 - 08:40  Myocardial Edema as a Novel Biomarker of Risk in Familial Dilated Cardiomyopathy
                Mohamed Elamin, M.D. (The Ohio State University)

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FRIDAY 2 FEBRUARY

08:40 - 08:50   Right ventricular outflow tract obstruction in the setting of hypertrophic cardiomyopathy
Bharath Sathya, MD (National Institutes of Health/NHLBI)

08:50 - 09:00   Athlete’s Heart or Hypertrophic Cardiomyopathy?
Dina Radenkovic, BSc; MBBS Candidate (Barts Heart Centre & UCL Medical School, London, UK)

09:00 - 09:10   CMR relaxometry in Friedreich ataxia
Elena Giulia Milano, MD (Bristol Heart Institute)

09:10 - 09:20   An unexplained arrhythmias: the fine line between cardiac sarcoidosis and arrhythmogenic cardiomyopathy.
Martina Previato, MD (Department of Cardiac, Thoracic and Vascular Sciences. University of Padua. Italy.)

09:20 - 09:30   Diagnostic biopsy and regenerative therapy with real-time MR guidance
Steven Chamuleau, MD, PhD (Utrecht University Medical Center)

08:00 - 09:25 ROOM 4
Oral Abstract Session 2

Early Career Awards 2: Translational

Chairs: Frederick Epstein, PhD (University of Virginia)
Albert de Roos, MD, PhD (Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands)
Robert Weiss, MD (Russell H. Morgan Department of Radiology and Radiological Science, The Johns Hopkins University School of Medicine, Baltimore, MD, United States)

08:00 - 08:12   3D High resolution imaging of ventricular scar: head-to-head comparison of three late gadolinium enhancement (LGE) sequences in a porcine infarct model at 1.5T
Rahul Mukherjee, MBBS (King’s College London)

08:12 - 08:24   Effect of rare variants in Hypertrophic Cardiomyopathy genes on cardiac morphology in health and disease using machine-learning of CMR
Antonio de Marvao, MRCP, PhD (MRC London Institute of Medical Sciences)

08:24 - 08:36   Feasibility and reproducibility of a free-breathing, multi-shot, navigated image acquisition for ventricular volume quantification during continuous exercise: A pilot study of healthy controls
Pei Chew, MBChB(Hons) (University of Leeds)

08:36 - 08:48   Fractal analysis of right ventricular trabeculae in pulmonary hypertension
Timothy Dawes, FRCA, PhD. (Imperial College London)

08:48 - 09:00   Microvascular Dysfunction is a Coronary Artery Specific Phenomenon, associated with Elevated Microvascular Resistance, Myocardial Hypo-Perfusion and Dysfunction - Time for a Paradigm Shift
Alexander Liu, MBBS BSc (University of Oxford)
FRIDAY 2 FEBRUARY

09:00 - 09:12 Simultaneous 3D Whole-Heart Bright-Blood Visualization of the Coronary Sinus and Heart Anatomy and Black-Blood PSIR Depiction of Atrial Walls for Non-Contrast Enhanced Interventional Planning
Giulia Ginami, PhD (King’s College London)

09:12 - 09:25 Validation of myocardial perfusion mapping: from invasive physiology to mapping
Tushar Kotecha, MRCP(UK) MBChB (Royal Free London NHS Foundation Trust)

08:00 - 08:25 ROOM 5
Focus Session 2

CMR in Acute Coronary Syndromes

Chairs: Jose Rodriguez-Palomares, MD, PhD (Attendant Physician)
Manish Motwani, MB ChB, PhD (Manchester Heart Centre)

08:00 - 08:15 Going beyond LGE to predict viability and recovery in ACS
Luigi Natale, MD (Catholic University of Rome)

08:15 - 08:25 Long-term outcomes of unrecognized myocardial infarction in the elderly – Findings from the ICELAND MI study
Tushar Acharya (National Heart, Lung, and Blood Institute, NIH)

08:25 - 08:35 Prognostic Value Of Global Circumferential Strain As Assessed By Feature-Tracking Cardiac Magnetic Resonance In Patients With A First St-Elevation Myocardial Infarction
Gaetano Nucifora, MD, PhD (University Hospital of South Manchester)

08:35 - 08:45 Optimized Prognosis Assessment in ST-Segment Elevation Myocardial Infarction Using a Cardiac Magnetic Resonance Imaging Risk Score
Thomas Stiermaier, MD (University Heart Center Lübeck)

08:45 - 08:55 Free-breathing Late Gadolinium-enhanced CMR to Identify the Cause of Myocardial Infarction with Non-obstructed Coronary Arteries
Pierre-Francois Lintingre, (CHU Bordeaux)

08:55 - 09:05 Lipomatous Metaplasia of Hemorrhagic Myocardial Infarction is a Self-Perpetuating Process Driven by Foam Cell Formation and Iron Recycling
Ivan Cokic, MD (Cedars-Sinai Medical Center)

09:05 - 09:15 Prognostic value of featuring-tracking cardiac magnetic strain parameters in ST-segment elevation myocardial infarction patients with a concurrent chronic total occlusion.
Joëlle Elias, MD (Academic Medical Center Amsterdam)

09:15 - 09:25 Relationship between CMR-derived parameters of ischemia / reperfusion damage and the timing of CMR after reperfused ST-segment elevation myocardial infarction
Anna Giulia Pavon, Cardio-Thoracic Vascular Department, San Raffaele Hospital, Milan, Italy (Cardiac MR Center-Cardiology Unit-University Hospital-CHUV-Lausanne, Switzerland)
FRIDAY 2 FEBRUARY

08:00 - 09:26  
Oral Abstract Session 8

CMR in Pediatrics and Congenital Heart Diseases I

Chairs:  
Reza Razavi, MD, PhD (King’s College London)  
Janine Arruda, MD (Rainbow Babies and Children’s Hospital)

08:00 - 08:15  
Multicentric Pediatric CMR Studies - Lessons and Results from the LGE in HCM Study
Lars Grosse-Wortmann, MD (The Hospital for Sick Children)  
Raymond Chan, MD MPH FRCPC (Toronto General Hospital)

08:15 - 08:27  
Selective heart rate inhibition optimizes exercise haemodynamics and energetic efficiency of the single ventricle in patients with Fontan circulation
Bram Ruijsink, MD (King’s College London)

08:27 - 08:39  
Surgical planning prediction of hepatic flow distribution for Fontan revisions using preoperative boundary conditions: a comparison with post-operative data
Phillip Trusty, MS (Georgia Institute of Technology)

08:39 - 08:51  
Assessing myocardial fibre architecture in ex vivo specimens of congenital heart disease.
Cyril Tous, ME, MR, MB, BE, B.Sc (The University of Auckland)

08:51 - 09:02  
CMR-determined RV dysfunction but not dilatation correlates with prognostic reductions in Cardiopulmonary Exercise Performance in Repaired Tetralogy of Fallot
Imran Rashid, PhD FRACP (King’s College London)

09:02 - 09:14  
Ascending aortic wall shear stress in TGA patients after arterial switch operation in children and young adolescents
Roel van der Palen, MD (Division of Pediatric Cardiology, Department of Pediatrics, Leiden University Medical Center, Leiden, The Netherlands)

09:14 - 09:26  
Atlas based methods for understanding single ventricle pathologies
Kathleen Gilbert, BE(hons), PhD (University of Auckland, New Zealand)

08:00 - 09:25  
Technologist Track Session 1

CMR Technical Methods

Chairs:  
Stephen Darty, BSRT (Duke University)  
Jennifer Bryant, PhD (National Heart Centre Singapore)

08:00 - 08:05  
Welcome
Stephen Darty, BSRT (Duke University)

08:05 - 08:25  
Cine and Flow
Niall Keenan, MD(Res) FESC (West Herts NHS Trust)
FRIDAY 2 FEBRUARY

8:25 - 08:45   T1/T2 parametric mapping
               Byoung Wook Choi, MD, PhD (Yonsei University)

08:45 - 09:05  Perfusion
               Nuno Bettencourt, MD, PhD (Faculty of Medicine, University of Porto)

09:05 - 09:25  T2* parametric mapping
               Christopher Dyke, MD (Alaska Heart and Vascular Institute)

08:00 - 10:15  HANDS ON ROOM
Level 2/3 case sessions
Perfusion - Session 1

Chairs:  Robin Nijveldt, MD, PhD (Radboudumc)
         Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)
         John Paul Carpenter, MD(Res) FRCP (Poole Hospital NHS Foundation Trust)

08:45 - 10:15  COURSE ROOM
Special Course 1
Preparing for Discovery - Session 2

Chairs:  James Moon, MD (UCL)
         Philip Kilner, (Emerson College, UK.)

09:30 - 10:15  LECTURE ROOM
Short Lecture 2
The Role of CMR in Valvular Heart Disease

Chairs:  Per Lav Madsen, MD DMSc (University of Copenhagen)
         Steven Wolff, MD, PhD (Carnegie Hill Radiology)

09:30 - 09:45  The additional value of CMR over TTE in mitral regurgitant disease
               Seth Uretsky, MD, FACC (Morristown Medical Center)

09:45 - 10:00  The additional value of CMR over TTE in aortic regurgitant disease
               Saul Myerson, MD, FRCP (University of Oxford)

10:00 - 10:15  The role of CMR in TAVI planning and follow-up
               Gianluca Pontone (Centro Cardiologico Monzino, IRCCs)
**FRIDAY 2 FEBRUARY**

09:30 - 10:15  
**Didactic Case Session 2**  
*Valvular Function and Flow - Is CMR Useful in Timing of Repair?*

**Chairs:**  
Victor Ferrari, MD (Hospital of the University of Pennsylvania and Penn Cardiovascular Institute, Cardiovascular Division, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA)  
João Cavalcante, MD, FACC (University of Pittsburgh/UPMC)

09:30 - 09:53  
**Aortic regurgitation - when echo is not sufficient for timing of surgery**  
Tomaz Podlesnikar, MD (Leiden University Medical Center, Leiden, The Netherlands)  
Rob van der Geest, PhD (Department of Radiology, Leiden University Medical Center, The Netherlands)

09:53 - 10:15  
**Mitral stenosis - the role of CMR**  
Maria Eduarda Siqueira, MD, PhD (Sociedade Brasileira de Cardiologia)  
Marly Uellendahl, MD, PhD (DASA São Paulo, Universidade Federal de São Paulo - Unifesp)

09:30 - 10:15  
**Quick Fire Session 1**  
*Basic*

**Chairs:**  
Christopher Nguyen, PhD (Cedars-Sinai Medical Center)  
Peng Hu, PhD (UCLA)

09:30 - 09:33  
**Stop drawing circles! Deep learning for automating volumetric analysis**  
Rhodri Davies, MRCP, PhD (Barts Heart Centre, London, United Kingdom)

09:33 - 09:36  
**Machine Learning Based Modelling of Segmental Native T1 Distribution to Classify Cardiomyopathy State in Patients with Unexplained Left Ventricular Hypertrophy**  
Mariam Narous (University of Alberta)

09:36 - 09:39  
**A novel acquisition strategy for Dark-Blood T1-TSE Imaging improves blood signal suppression, image sharpness, and overall clinical image quality**  
Wolfgang Rehwald, PhD (Siemens Healthineers and Duke Cardiovascular MR Center)

09:39 - 09:42  
**The importance of Magnetization Transfer on simulation-based quantitative Magnetic Resonance Imaging techniques**  
Christos Xanthis, PhD (Lund University, Skane University Hospital, Department of Clinical Physiology, Lund, Sweden)

09:45 - 09:48  
**Intramyocardial injections guided by active MR-tracking for regenerative therapy**  
Steven Wenker, MD (Utrecht University Medical Center)

09:48 - 09:51  
**Quantitative Coronary Flow Imaging using Breath-hold Cine FISS Arterial Spin-Labeled MR Angiography**  
Robert Edelman, MD (NorthShore University HealthSystem)
FRIDAY 2 FEBRUARY

09:51 - 09:54 Toward Clinically-Practical Free-breathing Whole-Heart 3D Cine with Isotropic Resolution and High Contrast
Peng Lai, PhD. (GE Healthcare)

09:54 - 09:57 Histone Deacetylase Expression in the Human Heart and Brown Adipose Tissue Imaged In Vivo with Simultaneous PET-MR of 11C-Martinostat
Choukri Mekkaoui, PhD. (Harvard Medical School - Massachusetts General Hospital - Athinoula A. Martinos Center for Biomedical Imaging - Boston, MA)

10:00 - 10:03 Differential quantification of interstitial and dense myocardial fibrosis by high field MRI in a murine myocardial infarction model according to cardiac PW1 cell expression.
Khaoula Bouazizi, PhD (Institute of Cardiometabolism and Nutrition)

10:03 - 10:06 Prospective correction of patient-specific respiratory motion in T1 mapping
Michael Bush, M.S. (The Ohio State University)

10:06 - 10:09 Deep Learning for Fully Automatic Contouring of the Left Ventricle in Cardiac T1 Mapping
Evan Hann, (University of Oxford)

10:09 - 10:12 Comprehensive Evaluation of Global and Regional Macroscopic and Microscopic Myocardial Fibrosis by Cardiac MR: Intra-individual Comparison of Gadobutrol Versus Gadoterate Meglumine
James Carr, MD (Northwestern University)

09:30 - 10:15
Special Session 3
CMR in Myocarditis: Diagnosis, Treatment Evaluation and Outcome

Chairs: Cristina Basso, MD, PhD (University of Padova Medical School, Padua, Italy)
Marco Francone, Medicine (Policlinico Umberto I, Sapienza University of Rome)

09:30 - 09:45 Should all patients with suspected myocarditis undergo CMR?
Simon Greulich, (University of Tübingen)

09:45 - 10:00 The role of CMR in myocarditis: too early or enough evidence for clinical practice?
Jerome Garot, MD, PhD (Cardiology)

10:00 - 10:15 CMR in myocarditis: Lake Louise Criteria, T1- and T2-Mapping or all?
Matthias Gutberlet, MD (University of Leipzig – Heart Centre, Department of Diagnostic and Interventional Radiology)
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09:30 - 10:15  
Pediatric Track

QEE: Quality, Economics and Education in Congenital CMR

Chairs: Kan Hor, MD (Nationwide Children’s Hospital)  
        Steffen Petersen, MD DPhil MPH FRCP (Queen Mary University of London)

09:30 - 09:45  Quality Improvement in congenital CMR imaging  
    Nadine Choueiter, MD (The Pediatric Heart Center, The Children’s Hospital at Montefiore,  
    Albert Einstein College of Medicine)

09:45 - 10:00  The economics of congenital heart disease  
    Ali N Zaidi, MD (Montefiore Heart and Vascular Care Center, Albert Einstein College of Medicine)

10:00 - 10:15  The EuroCMR exam in congenital and pediatric heart disease  
    Oliver Tann, MRCP, FRCR (Great Ormond Street Hospital)

09:30 - 10:15  
Technologist Track Session 2

CMR How To

Chairs: Ronald Williams, B.A. (Allegheny General Hospital)  
        Pairoj Chatranukulchai, MD, MSc (Cardiac Center, King Chulalongkorn Memorial Hospital,  
        Chulalongkorn University, Bangkok, Thailand)

09:30 - 09:41  Ventricular volumes  
    Ramon van Loon (VU University Medical Center)

09:41 - 09:53  LGE and black blood imaging  
    Yiyong Han (Clinical Imaging Research Centre)

09:53 - 10:04  Perfusion imaging  
    Tracy Horn (Papworth Hospital NHS Foundation Trust)

10:04 - 10:15  Vessel and valve flow imaging  
    Daniel Roberts, BSc (Barts Health NHS Trust)
FRIDAY 2 FEBRUARY

10:15 - 11:00  
**Moderated ePoster Session 4**  
EXHIBITION HALL (EPOSTER STATION 1)

**Women's Cardiovascular Disease**

*Chairs:*  
Christina Deluigi, (University Hospital Bern)  
Sophie Mavrogeni, MD, PhD (Onassis Cardiac Surgery Center)

10:15 - 10:23  
**A history of pre-eclampsia is not associated with cardiomyopathy beyond the peripartum period**  
Lauren Coles, BSc (Department of Cardiovascular Sciences, University of Leicester and NIHR Biomedical Research Unit, Glenfield Hospital)

10:23 - 10:31  
**Parametric CMR and myocardial feature tracking identify early myocardial involvement in patients with systemic lupus erythematoses**  
Vera Lachmann, MD (Division of Cardiology, Pulmonology and Vascular Medicine, Heinrich Heine University, Düsseldorf, Medical Faculty, Germany)

10:31 - 10:39  
**Cardiac involvement of asymptomatic carriers of Duchenne and Becker muscular dystrophy**  
Roman Panovsky, International Clinical Research Center, 1st Department of Internal Medicine/Cardioangiology (St. Anne’s Faculty Hospital, Brno, Czech Republic)

10:39 - 10:47  
**Gender Differences in Referral for Cardiovascular Magnetic Resonance (CMR) Imaging: Inaugural Findings from the Cardiovascular Imaging Registry of Calgary (CIROC)**  
Carmen Lydell, MD (Stephenson Cardiac Imaging Centre, Libin Cardiovascular Institute of Alberta, University of Calgary)

10:47 - 10:55  
**Role of gender in clinical presentation, morpho-functional and tissue characterization features of arrhythmogenic cardiomyopathy.**  
Anna Piccoli, MD (Division of Cardiology, Department of Medicine, University of Verona, Verona, Italy)

10:15 - 11:00  
**Moderated ePoster Session 5**  
EXHIBITION HALL (EPOSTER STATION 2)

**Rapid, Efficient Imaging**

*Chairs:*  
Leon Axel, PhD, MD (NYU School of Medicine)  
Claudia Prieto, PhD (King’s College London)

10:15 - 10:23  
**Measuring myocardial tissue velocity with single breath hold Golden-Angle radial high temporal resolution phase contrast CMR: A comparison with pulsed wave tissue Doppler echocardiography**  
Alexander Fyrdahl, M. Sc. (Karolinska Institutet)

10:23 - 10:31  
**High-Resolution Dynamic Topaz T1 Mapping Using Low Rank Tensor Regularization**  
Burhaneddin Yaman, (Electrical and Computer Engineering, University of Minnesota; Center for Magnetic Resonance Research, University of Minnesota)

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10:31 - 10:39  3D Whole-Ventricle, Free-breathing, ECG-less, Myocardial T1 Mapping with CMR Multitasking
Jaime Shaw, MS (Cedars-Sinai Medical Center)

10:39 - 10:47  Towards 4D flow High-resolution Imaging with a priori Knowledge Incorporating the Navier-
Stokes equations and the discontinuous Galerkin method (4D flow HIKING)
Johannes Töger, PhD (Lund University, Skåne University Hospital)

10:47 - 10:55  Real-time assessment of myocardial deformation: the intra- and inter-observer agreement
of LV strain using strain-encoded CMR imaging
Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)

10:15 - 11:00  EXHIBITION HALL (EPOSTER STATION 3)

Moderated ePoster Session 6

Pre-Clinical Validation of an Existing Technique

Chairs: Daniel Ennis, PhD (Department of Radiological Sciences, University of California, Los Angeles, CA, USA.)
        Dudley Pennell, MD (Royal Brompton Hospital)

10:15 - 10:23  Acute effects of haemodialysis on cardiac function and tissue characterisation
Tushar Kotecha, MRCP(UK) MBChB (Royal Free London NHS Foundation Trust)

10:23 - 10:31  Donor and recipient characteristics are associated with CMR-derived cardiac structural and
functional differences following heart transplantation
Ryan Dolan, MD (Northwestern University)

10:31 - 10:39  Validation of fully automated quantitative myocardial perfusion by cardiovascular magnetic
resonance compared to coronary sinus flow at 1.5T and 3T
Raquel Themudo, MD, PhD (Department of Clinical Physiology, Karolinska Institutet and
Karolinska University Hospital)

10:39 - 10:47  Myocardial trabeculae improve left ventricular function: a combined UK Biobank and
computational analysis
Timothy Dawes, FRCA, PhD. (Imperial College London)

10:47 - 10:55  Impact of Large Hiatus Hernia on Cardiac Function. An observational cohort study by Cardiac
Magnetic Resonance.
Pamela Milito (Università degli studi di Milano)

10:15 - 11:00  EXHIBITION HALL (ECASE STATION 4)

Moderated eCase Session 2

Non-Ischemic Cardiomyopathy

Chairs: Kevin Steel, DO (USAF)
        Luigi Natale, MD (Catholic University of Rome)

10:15 - 10:23  In patients with vanishing white matter disease, could cardiac MRI reveal a concealed
pathology?
Dina Haroun, MBBCh,MSc (Radiology fellow Aswan Heart Center (Magdi Yacoub Heart
Foundation ),assistant lecturer Radiology department - Kasr Al Ainy Cairo university.)
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10:23 - 10:31  Biventricular dysfunction in neuronal ceroid lipofuscinosis: dual pathology or a unifying aetiology?
Lydia Bos, (Hospital de la Santa Creu i Sant Pau)

10:31 - 10:39  First Case of Quantitative Perfusion Mapping in Fabry Cardiomyopathy
Rebecca Hughes, MBBS MRCP (Barts Heart Centre)

10:39 - 10:47  Fulminant myocarditis with checkpoint inhibitor immunotherapy: Late gadolinium enhancement on cardiovascular magnetic resonance with pathological correlation
Vinh Nguyen, MD (Yale School of Medicine)

Lorena Capeline, (University of São Paulo)

11:00 - 11:40  EACVI and SCMR Assembly

The assemblies for both societies are a time in the program to learn more about the innumerous characteristics of both EuroCMR section of EACVI and SCMR. In this special session, the societies will highlight some of their numbers, the main activities being offered by the different committees and task forces as well as opportunities that new members might seek to be an active part of either groups. If you are a member or want to learn more, this portion of the program is the place to understand what EuroCMR and SCMR are all about.

11:40 - 12:25  Invasive Live Case

Chairs:  Reza Razavi, MD, PhD (King’s College London)

11:40 - 11:50  Introduction
Reza Razavi, MD, PhD (King’s College London)

11:50 - 12:10  Live Case from King’s College London
Kuberan Pushparajah (King’s College London)

12:10 - 12:25  Discussion and conclusions
Reza Razavi, MD, PhD (King’s College London)

12:30 - 13:30  Circle Cardiovascular Imaging Satellite Symposium

The CMR Technology of the Future is Here

Chairs:  Matthias Friedrich, MD (McGill University Health Centre)
Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

12:30 - 13:30  Machine Learning and Big Imaging Data
Steffen Petersen, MD DPhil MPH FRCP (Queen Mary University of London)
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Imaging Myocardial Fibers
Dudley Pennell, MD (Royal Brompton Hospital)

Improved Time Efficiency in CMR Imaging
Matthias Stuber, PhD (University of Lausanne)

3D multi-parametric MRI: get all in one
Rene Botnar, PhD (King’s College London)

Remote and Automated Scanning
Bob Hu, MD (HeartVista)

Cardiothoracic 4D Flow MRI
Michael Markl, PhD (Northwestern University)

13:30 - 15:00
Case Session 3
Level 1 Track

Pericardial Disease

Chairs: Jens Bremerich, MD (University Hospital Basel)
Marco Francone, Medicine (Policlinico Umberto I, Sapienza University of Rome)

13:30 - 13:40 Pearls of the Pericardium
Mouaz Al-Mallah, MD MSc (King AbdulAziz Cardiac Center)

Manphool Singhal, (Post Graduate Institute of Medical Education and Research, Chandigarh. India)

13:50 - 14:00 A 20 year-old female with chest pain, pericardial effusion and pericardial mass.
Arlene Sirajuddin, MD (National Institutes of Health)

14:00 - 14:10 Tuberculous Pericarditis. From overt pathology to healing. Insights from CMR
Enric Cascos-Garcia, (Hospital Universitari Germans Trias i Pujol. Badelona. Barcelona)

14:10 - 14:20 A Cardiac Mass Missed on CT and Echocardiography: The Added Value of CMR
Akhil Narang, MD (University of Chicago)

14:20 - 14:30 Recurrent chest pain following surgical repair of cor triatriatum in a young teenager
Rukmini Komarlu, MD (Cleveland Clinic Children’s Hospital)

14:30 - 14:40 Complex pericardial cyst and congestive hepatopathy: The role of cardiac MRI with pathologic validation
Vinh Nguyen, MD (Yale School of Medicine)

14:40 - 14:50 Unusual Cause of Chest Pain
Tatiana Stipalova (International Clinical Research Center, St. Anne’s Faculty Hospital, Brno, Czech Republic)

14:50 - 15:00 Pericardial constriction - how good is CMR at confirming the diagnosis?
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)
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13:30 - 14:55
Lecture Session 3

CMR and Women’s Heart Disease

Chairs: Allison Hays, MD (Division of Cardiology, The Johns Hopkins University School of Medicine, Baltimore, MD, United States)
       Anna Herrey, MD PhD MRCP (Barts Heart Centre)

13:30 - 13:45 Noninvasive Imaging to Evaluate Women with Ischemic Heart Disease
       Subha Raman, MD, MSEE (The Ohio State University)

13:45 - 14:00 Myocardial infarction with non-obstructive coronary arteries
       Suzette Elias-Smale, (Radboudumc Nijmegen)

14:00 - 14:15 Microvascular Disease
       Dana Dawson, MD, PhD (University of Aberdeen)

14:15 - 14:30 Takotsubo Cardiomyopathy
       Barbara Srichai, MD (Georgetown University School of Medicine)

14:30 - 14:45 Parametric Maps, Function and Cardiac Mass: What is Different in Women?
       Niti Aggarwal, MD (University of Wisconsin)

14:45 - 14:55 Discussion

13:30 - 14:55
Oral Abstract Session 3

Non Ischemic Cardiomyopathy: Evaluation and Outcomes

Chairs: Sebastian Kelle, MD, PhD (German Heart Center Berlin)
        PierGiorgio Masci, PierGiorgio Masci (Centre for Cardiac MR – University Hospital of Lausanne)

13:30 - 13:42 Creatine Kinase Kinetics are Increased in Obese Heart Failure: Is This The Answer to the Obesity Paradox?
        Jennifer Rayner, BMBCh, MRCP(UK) (OCMR, University of Oxford)

13:42 - 13:54 Risk stratifying patients with suspected myocarditis with extracellular volume assessment by cardiovascular magnetic resonance imaging
        Christoph Gräni, MD (Brigham and Women’s Hospital, Harvard Medical School, Boston)

13:54 - 14:06 Prognostic implications of apical hypertrophic cardiomyopathy
        Clement Cholet, M.D. (University of Pittsburgh Medical Center)

14:06 - 14:18 T1-mapping as a biomarker for myocardial disease in Fabry disease
        Alexander Hirsch, MD, PhD (Erasmus Medical Center)

14:18 - 14:30 The prevalence of microvascular obstruction in cardiac sarcoidosis
        Sabiha Gati, MRCP (UK), PhD (Royal Brompton & Harefield NHS Trust)
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14:30 - 14:42 Role of myocardial strain assessed by CRM tissue-tracking to predict adverse cardiovascular events in cardiac amyloidosis.
Ilaria Dentamaro, MD (Hospital Vall d’Hebron Barcelona)

14:42 - 14:55 CMR to assess treatment response in cardiac AL amyloidosis – findings from the ALchemy study
Ana Martinez Naharro, MD (UCL Department of CMR, Royal Free Hospital)

13:30 - 14:55 Focus Session 3

ROOM 5

Global and Regional Function Analysis

Chairs: Gerald Pohost, MD (USC)
Christopher Miller, MBChB PhD (University Hospital of Manchester)

13:30 - 13:45 Diastolic Function and Feature Tracking to Aid in Better Function Quantification
Elie Mousseaux, MD, PhD (European Hospital Georges Pompidou APHP; INSERM U970 PARCC Paris descartes University)

13:45 - 13:55 Evaluation of e-prime with Cardiac Magnetic Resonance Cine imaging—Preliminary Validation by Echocardiography
Dana Peters, PhD (Yale University)

13:55 - 14:05 Mechanistic insight into TakoTsubo cardiomyopathy beyond apical ballooning by myocardial deformation and statistical shape modelling analysis
Giulia Pontecorboi, MD (University of Florence, Italy, Bristol Heart Institute, Bristol, UK)

14:05 - 14:15 Left ventricular interstitial fibrosis and dysfunction in early chronic kidney disease: 2 year follow up study
Manvir Hayer, MBChB (University Hospitals Birmingham)

14:15 - 14:25 Association between cardiovascular magnetic resonance measures of extracellular volume and global longitudinal strain and comparison of their association with subsequent outcomes
Fredrika Fröjd, MS (Institute of Karolinska)

14:25 - 14:35 Prognostic and Functional implications of Left Atrial Late Gadolinium Enhancement
Michael Quail, MD (King’s College London)

14:35 - 14:45 Presence and Severity of Left Ventricular Diastolic Dysfunction Reflects Myocardial Interstitial Expansion
Andrea Cardona, MD (The Ohio State University Wexner Medical Center)

14:45 - 14:55 Exercise-induced cardiac remodelling in novice marathon runners
Andrew D’Silva, MBBS MRCP(UK) (St George’s University of London)
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13:30 - 14:55
Pediatric Track

Technical Advances in Pediatric/Congenital CMR

Chairs: Vivek Muthurangu, MD (Institute of Cardiovascular Science, University College London)
        Taylor Chung, MD (UCSF Benioff Children’s Hospital Oakland)

13:30 - 13:45 Fast Imaging in Pediatric CMR: A Primer
Adrienne Campbell-Washburn, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)

13:45 - 14:00 Virtual Stenting
Anja Hennemuth, Dr. (Fraunhofer MEVIS)

14:00 - 14:15 Machine Learning
Daniel Rueckert (Imperial College London)

14:15 - 14:30 Journey to the 4th Dimension - 4D cine imaging
Andrew Powell, M.D. (Harvard Medical School and Boston Children’s Hospital)

14:30 - 14:45 Exercise 4D flow: myth or reality?
Christopher Francois, MD (University of Wisconsin - Madison)

13:30 - 14:55
Technologist Track Session 3

Ischemic Heart Disease

Chairs: Patricia Feuchter, MSc (MRI) Radiology (Barts Heart Centre)
        Fiona Mcmillan, BSc (Hons) (University of Oxford)

13:30 - 13:50 Ischemia physiology
Theodoros Karamitsos, MD, PhD (1st Cardiology Department, Aristotle University of Thessaloniki, AHEPA Hospital)

13:50 - 14:10 Vasodilator Stress CMR Imaging
Anvesha Singh, MBChB, PhD (Glenfield Hospital)

14:10 - 14:30 Dobutamine Stress CMR
Richard Coulden, MB BS (University of Alberta Hospital)

14:30 - 14:50 Treadmill Stress CMR
Karolina Zareba, MD (The Ohio State University Wexner Medical Center)
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13:30 - 14:55
Special Course 2
COURSE ROOM
Live video demonstration – Ischemic and non-ischemic myocardial diseases with tissue characterization - Session 1

Chairs: Joaquin Lucena, MD PhD (Forensic Pathology Department. Institute of Legal Medicine and Forensic Sciences. Seville (SPAIN))
Cristina Basso, MD, PhD (University of Padova Medical School, Padua, Italy)
Martina Perazzolo Marra, MD, PhD (Department of Cardiac, Thoracic and Vascular Sciences)

13:30 - 15:45
Level 2/3 case sessions
HANDS ON ROOM
Perfusion - Session 2

Chairs: John Paul Carpenter, MD(Res) FRCP (Poole Hospital NHS Foundation Trust)
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)
Robin Nijveldt, MD, PhD (Radboudumc)

15:00 - 15:45
Short Lecture 3
LECTURE ROOM
Clinical Trials and Drug Development by CMR

Chairs: Bernhard Gerber, MD PhD (Cliniques St. Luc, Université Catholique de Louvain)
Albert de Roos, MD, PhD (Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands)

15:00 - 15:15  CMR Clinical Trials in Coronary Artery Disease: lessons and future directions
John Greenwood, PhD (University of Leeds)

15:15 - 15:30  CMR biomarkers as endpoints in STEMI clinical trial design – which most indicates treatment success
Gerry McCann, MB ChB, MD (University of Leicester)

15:30 - 15:45  How imaging can become a key player in the future of clinical trial and drug development
Raymond Kwong, MD, MPH (Brigham and Womens Hospital)
FRIDAY 2 FEBRUARY

15:00 - 15:45
Didactic Case Session 3

**CASE ROOM**
**Level 1 Track**

**Parametric Mapping - How can CMR help my Day-to-Day Practice?**

*Chairs:* Stefan Neubauer, MD, FRCP (University of Oxford)  
Julia Grapsa, MD, PhD (Cleveland Clinic Lerner College of Medicine)

15:00 - 15:23  **Inflammatory cardiomyopathy: More than meets the eye**  
Stefan Biesbroek, MD (VU University Medical Center)  
Albert van Rossum, Prof. dr. (VU University Medical Center)

15:23 - 15:45  **Mild septal hypertrophy: Do we need parametric mapping?**  
Chris Saunderson, MBChB (University of Leeds)  
Erica Dall’Armellina, MD, DPhil (Leeds Institute of Cardiovascular and Metabolic Medicine, Division of Biomedical Imaging, University of Leeds)

15:00 - 15:45
Quick Fire Session 2

**ROOM 4**

**Translational**

*Chairs:* Monica Mukherjee, MD, MPH (Johns Hopkins University School of Medicine)  
Amit Patel, MD (University of Chicago)

15:00 - 15:03  **Automatic Ejection Fraction in Three Minutes**  
Okai Addy, PhD. (HeartVista, Inc)

15:03 - 15:06  **Quantitative cardiac gene transfer imaging with CEST-MRI and a genetically encoded reporter gene**  
Moriel Vandsburger, PhD (University of California, Berkeley)

15:06 - 15:09  **Myocardial Blood Flow falls during stress in Hypertrophic Cardiomyopathy. A Perfusion mapping study.**  
Claudia Camaioni, MD (Barts Heart Center)

15:09 - 15:12  **MR Augmented Right Heart Catheterization in children with pulmonary arterial hypertension: Prognostic Significance**  
Bejal Pandya, MBBS (Barts Heart Centre)

15:15 - 15:18  **RF Ablation of the Left Atrium and Pulmonary Vein Ostia is well Visualized by Non-contrast-enhanced MRI in a Swine Model**  
Michael Guttman, MS (The Johns Hopkins University, School of Medicine)

15:18 - 15:21  **Non-Contrast Stress T1 Mapping CMR to Detect Mocardial Ischemia - Initial Experience**  
Sebastian Bohnen, MD (University Heart Center Hamburg)

15:21 - 15:24  **Selective apheresis of C-reactive protein reduces myocardial reperfusion injury in patients with ST-segment elevation myocardial infarction**  
Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)
FRIDAY 2 FEBRUARY

15:24 - 15:27  Automatic Optimal Frequency Adjustment for High Field Cardiac MR Imaging via Deep Learning
James Goldfarb, PhD (St Francis Hospital)

15:30 - 15:33  LA strain as an early imaging biomarker of Cardiotoxicity: Cardiotox – CMR sub-study
Anna Reid, MBChB (University Hospital of South Manchester)

15:33 - 15:36  Comparison of Cardiac Magnetic Resonance-Derived Blood Oximetry to Invasive Catheterization in Heart Transplant Recipients
Juliet Varghese, PhD (The Ohio State University)

Betty Raman, MBBS, FRACP (University of Oxford, Division of Cardiovascular Medicine)

15:39 - 15:42  Myocardial scar imaging using contrast steady state in a chronic porcine infarct model
John Whitaker, BM BCh (King’s College London/Beth Israel Deaconess Medical Centre)

15:00 - 15:45
Special Session 4

Interventional CMR: From Birth to Primetime - Discuss with the Experts

Chairs: Adrienne Campbell-Washburn, PhD (National Heart, Lung, and Blood Institute, National Institutes of Health)
Torique Hussain, MD, PhD (University of Texas Southwestern)

15:00 - 15:45  How to get MRI in every catheterization lab, and the next steps towards translation
Robert Lederman, MD (National Heart, Lung, and Blood Institute, National Institutes of Health)

MR catheterization vs MR electrophysiology
Vivek Muthurangu, MD (Institute of Cardiovascular Science, University College London)

What do I need to start ICMR?
Tobias Schaeffter, (Physikalisch-Technische Bundesanstalt, King’s College London)

15:00 - 15:48
Oral Abstract Session 9

CMR in Pediatrics and Congenital Heart Diseases II

Chairs: Emanuela Valsangiacomo Buechel, (University Childre’s Hospital Zurich)
Anne Marie Valente, MD (Harvard Medical School)

15:00 - 15:12  MR-Augmented Cardiopulmonary Exercise Testing in Young Adults with the Fontan Circulation
Nathaniel Barber, MBBS, MSc (UCL Institute of Cardiovascular Science & Great Ormond Street Hospital for Children)
FRIDAY 2 FEBRUARY

15:12 - 15:24  Assessment of caval blood flow distribution in Fontan circulation using arterial spin labeled measurement of pulmonary perfusion
Joshua Greer, BS (Dept. of Radiology, UT Southwestern Medical Center)

15:24 - 15:36  Factors limiting exercise in adults with transposition of the great arteries: an exercise cardiac magnetic resonance study
Frederik Helsen, MD (KU Leuven / University Hospitals Leuven)

15:36 - 15:48  Differences in right ventricular-pulmonary vascular coupling between standard tetralogy of Fallot vs. Pulmonary atresia and association with other CMR and clinical indices
Sujatha Buddhe, MD MS (Seattle Children’s Hospital)

15:00 - 15:45  TECH ROOM
Technologist Track Session 4
Non ischemic Cardiomyopathy

Chairs: Dinesh Kalra, MD, FACC (Rush University Medical Center Cardiology)
Wendy Norman, DCR(R), DRI (Institute of Cardiovascular Science, University College London)

15:00 - 15:11  Myocarditis
Jeanette Schulz-Menger, MD (Charité University Medicine Berlin and Helios Clinics)

15:11 - 15:23  Hypertrophic cardiomyopathy
Christopher Kramer, MD (University of Virginia)

15:23 - 15:34  The non ischemic dilated heart
Robert Adam, MBBS BSc(Hons) (University Hospital Southampton)

15:34 - 15:45  Glycogen storage disorders and dystrophies
Michael Campbell, MD, MHA (Duke University)

15:45 - 16:30  EXHIBITION HALL (EPOSTER STATION 1)
Moderated ePoster Session 7
CMR in Arrhythmias

Chairs: Kelvin Chow, PhD (Siemens Medical Solutions USA, Inc.)
Daniel Lee, MD, MSc (Northwestern University Feinberg School of Medicine)

15:45 - 15:53  Energetic and Vortex Size Alterations of Left Atrial Hemodynamics Using 4D Flow MRI: A Study in Patients with History of Paroxysmal Atrial Fibrillation
Julio Garcia, PhD (University of Calgary)

15:53 - 16:01  Evaluation of LGE-CMR for predicting VT ablation sites in nonischemic cardiomyopathy – direct comparison with electroanatomic maps.
Avanti Gulhane, M.D. (Perelman School of Medicine, University of pennsylvania)
FRIDAY 2 FEBRUARY

16:01 - 16:09  Determination of Conducting Channels from LGE CMR in patients with Myocardial Infarction-Comparison with Electroanatomic Mapping for Ventricular Tachycardia Ablation
Avanti Gulhane, M.D. (Perelman School of Medicine, University of Pennsylvania)

16:09 - 16:17  Robust myocardial T1 measurement in PVC patients with arrhythmia-insensitive-SASHA (AI-SASHA)
Zachary Rodgers, MD, PhD (UNIVERSITY OF PENNSYLVANIA HEALTH SYSTEM)

16:17 - 16:25  Visualizing radiofrequency ablation lesions in scarred arrhythmia substrate using non-contrast T1-weighted cardiac magnetic resonance imaging
Susumu Tao, MD, PhD (Johns Hopkins University, school of medicine)

15:45 - 16:30  EXHIBITION HALL (EPOSTER STATION 2)
Moderated ePoster Session 8
CMR to Predict Outcomes

Chairs: Orlando Simonetti, PhD (The Ohio State University) 
Erik Schelbert, MD, MS (University of Pittsburgh; Heart and Vascular Institute of UPMC)

15:45 - 15:53  An advanced electrocardiographic prognosis score predicts heart failure hospitalization or death beyond CMR measures including global longitudinal strain and extracellular volume fraction
Maren Maanja, MD (Karolinska Institutet)

15:53 - 16:01  Predicting MACE recurrence in ventricular fibrillation cardiac arrest survivors: a cardiovascular magnetic resonance imaging study
Anna Baritussio, MD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

16:01 - 16:09  Magnetic Resonance Adenosine Perfusion Imaging as Gatekeeper of Invasive Coronary Intervention (MAGNET) – Results of the Randomized Controlled Trial
Dominik Buckert, M.D. (University Hospital Ulm)

16:09 - 16:17  Reduced global longitudinal strain by feature tracking CMR is an independent predictor of all-cause mortality
Harsimran Singh, (St. Francis Hospital)

16:17 - 16:25  Cardiac outcome by CMR in SCAD
Abtehale Al-hussaini, MBBS,BSC, MRCP. (Cardiovascular Sciences, Glenfield Hospital, University Hospitals of Leicester NHS Trust, Leicester United Kingdom)
FRIDAY 2 FEBRUARY

15:45 - 16:30
Moderated ePoster Session 9

CMR in Acute Coronary Syndromes

Chairs: Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)
Mushabbar Syed, MD, FACC (Loyola University Medical Center)

15:45 - 15:53 Ticagrelor and left ventricular remodeling post-MI: assessment by cardiac magnetic resonance and molecular analysis.
Manuel Gutiérrez, MD (Hospital de Viladecans, Institut Català de la Salut (ICS). Cardiovascular Research Center (CSIC-ICCC), IIB-HSCSP.)

15:53 - 16:01 Differences in left ventricular volume and ejection fraction in patients with early and classic remodeling after acute myocardial infarction studied by cardiac MRI (CMR)
Martin Sinn, MD (Diagnostic and Interventional Radiology, University Hospital Eppendorf, Hamburg, Germany)

16:01 - 16:09 Insulin resistance modifies the therapeutic effect of Omega-3 Acid Ethyl Esters on Left Ventricular Remodeling After Acute Myocardial Infarction: The OMEGA-REMODEL Randomized Clinical Trial.
Kana Fujikura, MD, PhD (Brigham and Women’s Hospital)

16:09 - 16:17 Different deformation behaviors assessed by Cardiac Magnetic Resonance-Feature Tracking analysis among patients with myocardial rupture due to myocardial infarction
Alice Niero, MD (Depatment of Cardiac, Thoracic and Vascular Sciences. University of Padua. Italy)

16:17 - 16:25 Segmental Longitudinal Myocardial Strains Can Distinguish The Healthy, Area-at-risk and Infarcted Myocardial Segments In Acute Ischaemic Reperfusion Injury
Salomon Narodden, (Imperial College London)

15:45 - 16:30
EXHIBITION HALL (EPOSTER STATION 3)

Moderated eCase Session 3

Inflammatory

Chairs: Sebastiaan Bekkers, MD, PhD (Maastricht University Medical Center)
Herbert Frank, (University Hospital Tulln)

15:45 - 15:53 Syncope on exertion in a young male
Angelo Tommaso, MD (University of Messina)

15:53 - 16:01 The “Disappearing” Paraganglioma...Now you see it, now you don’t
Faraz Kureshi, MD, MSc (National Institutes of Health)

16:01 - 16:09 An ill defined right atrial abnormality on echocardiogram in a patient with Erdheim-Chester disease
Faraz Kureshi, MD, MSc (National Institutes of Health)
FRIDAY 2 FEBRUARY

16:09 - 16:17 An interesting case of Myocarditis
Luke Dancy, MBBS, MRCP (Kings College Hospital)

Lilia Sierra-Galan, MD, MCVT (American British Cowdray Medical Center)

16:30 - 18:00
Lecture Session 4
A joint session with the Nuclear Cardiology and Cardiac CT Section of the EACVI

Advanced Ischemia Imaging

Chairs: Andrew Arai, MD (National Heart, Lung and Blood Institute, National Institutes of Health)
Thor Edvardsen, MD, FESC (Oslo University Hospital)

16:30 - 16:45 ISCHEMIA Trial
Roxy Senior, MD, DM, FRCP, FESC, FACC (Royal Brompton Hospital, London and Imperial College London)

16:45 - 17:00 MR-INFORM Trial
Eike Nagel, MD, PhD (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)

17:00 - 17:15 Automated quantification of stress perfusion imaging
Hui Xue, PhD (National Heart, Lung, and Blood Institute)

17:15 - 17:30 Native parametric mapping in stress imaging
Stefan Neubauer, MD, FRCP (University of Oxford)

17:30 - 17:45 Stress imaging from history to outcome - Comparison of different modalities
Oliver Gaemperli, Prof (University Heart Center Zurich)

17:45 - 18:00 Discussion

16:30 - 18:00
Case Session 4

Miscellaneous

Chairs: Scott Flamm, MD MBA (Cleveland Clinic)
Christian Loewe, Prof. Dr. (Medical University of Vienna, Austria)

16:30 - 16:40 Something new in my field of view: incidental findings in CMR
Mark C. K. Hamilton, FRCR (Bristol Royal Infirmary)

16:40 - 16:50 Left Ventricular Aneurysm After Blunt Force Trauma in a Pediatric Patient
Michael Brock, MD (University of Florida Congenital Heart Center)
FRIDAY 2 FEBRUARY

16:50 - 17:00  A rare case of giant submitral left ventricular diverticulum
Rui Placido, MD (Santa Maria University Hospital, Cardiology Department, Lisbon Academic Medical Center, CCUL, Lisbon, Portugal)

17:00 - 17:10  Resting perfusion defect in a case of acute fulminent myocarditis
Ashish Doshi, MD, PhD (Children’s National Medical Center)

17:10 - 17:20  Improving recognition of intra-myocardial fat by CMR
Ana Martinez Naharro, MD (UCL Department of CMR, Royal Free Hospital)

17:20 - 17:30  Large Left Atrial Appendage Aneurysm: Imaging Identification of a Rare Anomaly
Noelle Garster, MD, MS (Medical College of Wisconsin)

17:30 - 17:40  The use of CMR in diagnosing and quantifying an unusual extracardiac shunt
Luca Conti, MD (Mater Dei Hospital)

17:40 - 17:50  Comprehensive coronary artery aneurysm assessment by CMR
Martin Mair  (University Hospital Bern)

17:50 - 18:00  Suspected Myocardial Infarction and Non-Obstructive Coronary Arteries: now what?
Joseph Selvanayagam, FRACP, DPhil (Flinders University, Adelaide, SA, Australia)

16:30 - 18:00  ROOM 4
Oral Abstract Session 4
Early Career Awards 3: Basic Science

Chairs:  Nicole Seiberlich, PhD. (Case Western Reserve University)
Matthias Stuber, PhD (University of Lausanne)
Dara Kraitchman, VMD, PhD (Johns Hopkins University School of Medicine)

16:30 - 16:42  Convolutional recurrent neural networks for dynamic cardiac MR image reconstruction
Chen Qin,  (Imperial College London)

16:42 - 16:54  Staging reperfused myocardial infarctions with T2 CMR: insights into the dependence on infarction type with ex-vivo validation
Guan Wang, MD (Cedars-Sinai Medical Center)

16:54 - 17:06  High resolution cardiac T1 mapping based on SUPER
Chenxi Hu, PhD (Yale University)

17:06 - 17:18  A quantitative comparison of navigator-gated Cartesian and self-navigated radial free-breathing 3D bSSFP whole-heart coronary MRA
John Heerfordt, MSc (Department of Radiology, University Hospital (CHUV) and University of Lausanne (UNIL) & Advanced Clinical Imaging Technology, Siemens Healthcare, Lausanne, Switzerland)
FRIDAY 2 FEBRUARY

17:18 - 17:30  Four-minute whole-heart coronary MRA with sub-millimeter isotropic resolution and 100% respiratory scan efficiency
Aurelien Bustin, MSc (Technische Universität München)

17:30 - 17:42  Free-breathing cine DENSE using phase-cycling with matchmaking and stimulated-echo image-based navigators
Xiaoying Cai, BS (University of Virginia)

17:42 - 17:55  The dependence of fatty remodeling of infarct territories on iron remnants from acute myocardial infarctions: a serial CMR study
Xingmin Guan, MS (Cedars-Sinai Medical Center)

16:30 - 18:00  Focus Session 4

16:30 - 16:50  Most Common Diagnostic Pitfalls in CMR: differentiating pathological vs normal variant states
Mouaz Al-Mallah, MD MSc (King AbdulAziz Cardiac Center)

16:50 - 17:00  Measuring myocardial performance across health and disease using contraction fraction
Rhodri Davies, MRCP, PHD (Barts Heart Centre, London, United Kingdom)

17:00 - 17:10  The impact of heart rate and inotropy on LV flow patterns and energetics in the normal heart: a 4D flow dobutamine CMR study
Jonathan Sundin, (Linköping University)

17:10 - 17:20  Incremental Value of Blood-oxygen-level-dependent in addition to stress-perfusion CMR at 3Tesla for Detecting Ischemia in Patients with Suspected Coronary Artery Disease
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)

17:20 - 17:30  Clinical application of cardiac hyperpolarized magnetic resonance: initial experiences
Damian Tyler, PhD. (University of Oxford)

17:30 - 17:40  Comparing Myocardial Fibrosis Quantification Methods For Risk Stratification in Patients With Suspected Myocarditis Using Cardiac Magnetic Resonance Imaging
Christoph Gräni, MD (Brigham and Women’s Hospital, Harvard Medical School, Boston)

17:40 - 17:50  Increased Homing of Mast Cells to Sites of Iron-Driven Inflammation Promotes Macrophage Foam Cell Formation and Fatty Degeneration of Hemorrhagic Myocardial Infarction
Ivan Cokic, MD (Cedars-Sinai Medical Center)

17:50 - 18:00  Z-score scaling for native T1 mapping: Application to normal data from different MR systems and to cardiac amyloidosis
Riccardo Kranzusch, (Deutsches Herzzentrum Berlin and Charité University Medicine Berlin)
FRIDAY 2 FEBRUARY

16:30 - 18:00
Pediatric Track

The Single Ventricle

Chairs: Emanuela Valsangiacomo Buechel (University Childre’s Hospital Zurich)
Mark Fogel, MD (Children’s Hospital of Philadelphia)

16:30 - 16:45 Introduction to Single Ventricle: anatomy and physiology
Tal Geva, MD (Harvard Medical School and Boston Children’s Hospital)

16:45 - 17:00 CFD and Clinical Planning
Tim Slesnick, MD (Emory University School of Medicine)

17:00 - 17:15 4D Flow and Energy Dissipation in the Fontan
Marcus Carlsson, MD, PhD (Lund University, Skane University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

17:15 - 17:30 Creating a Fontan Research Registry
Rahul Rathod, MD (Boston Children’s Hospital)

17:30 - 17:45 Imaging of Liver Disease in Fontan Patients
Shi-Joon Yoo, MD (The Hospital for Sick Children)

16:30 - 17:55
Technologist Track Session 5

CMR Outcomes and Surgical Planning

Chairs: Patricia Feuchter, MSc (MRI) Radiology (Barts Heart Centre)
Stephen Darty, BSRT (Duke University)

16:30 - 16:50 Stress CMR in Cardiology, does it help?
Hajime Sakuma, MD, PhD (Department of Radiology, Mie University Hospital)

16:50 - 17:10 Flow Independent Dark Blood Delayed Enhancement - Dark Blood Delayed Enhancement
Han Kim, MD (Duke University)

17:10 - 17:30 CMR of the thoracic aorta - surgical planning, TAVI, and 4D flow
Joseph Mammarrappallil, MD, PhD (Duke Medical Center)

17:30 - 17:50 CMR for mitral valve surgery
Cindy Comeau, BS,RT(MR)(N),FSMRT (NeoSoft, LLC, Pewaukee, WI)
FRIDAY 2 FEBRUARY

16:30 - 18:00  COURSE ROOM
Special Course 2
Live video demonstration – Ischemic and non-ischemic myocardial diseases with tissue characterization - Session 2

Chairs: Martina Perazzolo Marra, MD, PhD (Department of Cardiac, Thoracic and Vascular Sciences)  
Cristina Basso, MD, PhD (University of Padova Medical School, Padua, Italy)  
Joaquin Lucena, MD PhD (Forensic Pathology Department. Institute of Legal Medicine and Forensic Sciences. Seville (SPAIN))

18:05 - 19:00  PLENARY ROOM
Software Face-off

Chairs: Gianluca Pontone, (Centro Cardiologico Monzino, IRCCs)  
Christopher Miller, MBChB PhD (University Hospital of Manchester)

Arterys  
Albert Hsiao (La Jolla, USA)  
Medis Medical Imaging Systems  
David Hautemann (Leiden, NL)  
Medviso AB  
Einar Heiberg (Lund, SE)  
Neosoft, LLC  
Steven Wolff (New York, USA)  
TeraRecon  
Alberto Clemente (Masa, IT)

19:00 - 20:00  Meet & Greet Reception (in the Exhibition Hall)
### Programme at a Glance

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**Breaks:**
- 10:00 - 10:15
- 12:00 - 12:15
- 14:00 - 14:15
- 16:00 - 16:15
SATURDAY 3 FEBRUARY

08:00 - 09:15
Outreach Session

Outcomes Research and Imaging

Chairs: Jagat Narula, MD, PhD (The Mount Sinai Hospital)
John Greenwood, PhD (University of Leeds)

08:00 - 08:12 Use and Abuse of CMR Perfusion Imaging
Adam Timmis, (Bart’s Heart Centre, London, UK)

08:12 - 08:24 The clinical value and cost-effectiveness of diagnostic imaging
Francesco De Cobelli, MD, EBCR (San Raffaele University Hospital)

08:24 - 08:36 Outcomes research in cardiovascular imaging
Jeroen Bax, MD, PhD (FESC)

08:36 - 08:48 Is it Time to Include CMR as a Core Attribute in Classification of Cardiomyopathies?
Jagat Narula, MD, PhD (The Mount Sinai Hospital)

08:48 - 09:00 How does CMR fit in international guidelines?
Florian von Knobelsdorff, MD (Dept. of Cardiology, Clinic Agatharied, University of Munich)

09:00 - 09:15 Discussion

08:00 - 09:25
Lecture Session 5

A joint session with the European Society of Cardiac Radiology (ESCR)

MRA and 4D Flow

Chairs: Florian von Knobelsdorff, MD (Dept. of Cardiology, Clinic Agatharied, University of Munich)
Matthias Gutberlet, MD (University of Leipzig – Heart Centre, Department of Diagnostic and Interventional Radiology)

08:00 - 08:15 MR Coronary Angiography - ready for clinical use in 2018?
Matthias Stuber, PhD (University of Lausanne)

08:15 - 08:30 Is there a role for MRA in acute aortic syndrome?
James Carr, MD (Northwestern University)

08:30 - 08:45 Improvements in 4D flow image acquisition and postprocessing - Update 2018
Michael Markl, PhD (Northwestern University)

08:45 - 09:00 4D flow MR to better understand intracardiac hemodynamics
Håkan Arheden, MD PhD (Lund University, Skåne University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

09:10 - 09:15 Thoracic aorta 4D flow - When can we use it for clinical decision making?
Sergio Uribe, PhD, (Pontificia Universidad Católica de Chile)

09:15 - 09:25 Discussion
SATURDAY 3 FEBRUARY

08:00 - 09:30
Case Session 5

Systemic and Inflammatory Disease

Chairs: Alexander Hirsch, MD, PhD (Erasmus Medical Center)
        Covadonga Fernández Golfin, Dr (Ramon y Cajal University Hospital. Madrid)

08:00 - 08:10 How can CMR help to identify infectious diseases affecting the heart
Marly Uellendahl, MD, PhD (DASA São Paulo, Universidade Federal de São Paulo - Unifesp)

08:10 - 08:20 Imaging of acute myocarditis in patient with systemic lupus erythematosus
Andreja Cercek Cerne, MD, PhD (University Medical Centre Ljubljana)

08:20 - 08:30 The classic cardiac involvement in Erdheim-Chester disease
Klaus Schumacher, (State University of Campinas - UNICAMP)

08:30 - 08:40 Serial CMR Follow Up of Left Ventricular Pseudoaneurysm and Aneurysm In a Child With
May-Thurner Syndrome.
Ronak Naik, MD, FACC (University of Tennessee Health Science Center)

08:40 - 08:50 Cardiac sarcoidosis with features mimicking hypertrophic obstructive cardiomyopathy
Stacey Elangovan, MD (Hospital of the University of Pennsylvania)

08:50 - 09:00 Cardiac Amyloidosis with Normal Transthoracic Echo
Adrián Löffler, MD (University of Virginia Health System)

09:00 - 09:10 Giant cell myocarditis: Cardiac MR findings and pathology correlation on endomyocardial
biopsy and explanted heart.
Mohamed Abdelrazek, (Ottawa University)

09:10- 09:20 Unknown systemic lupus erythematosus initially suspected by CMR.
Lilia Sierra-Galan, MD, MCvT (American British Cowdray Medical Center)

09:20 - 09:30 Is something infiltrating the heart?
Chetan Shenoy, M.D. (Cardiovascular Division, Department of Medicine, University of
Minnesota)

08:00 - 09:25
Oral Abstract Session 5

Diagnosis of Ischemic Heart Disease and Perfusion

Chairs: Jose Rodriguez-Palomares, MD, PhD (Attendant Physician)
        Karolina Zareba, MD (The Ohio State University Wexner Medical Center)

08:00 - 08:12 Fully Quantitative Cardiac Magnetic Resonance Myocardial Perfusion Ready for Clinical
Use: A comparison between Magnetic Resonance Imaging and Positron Emission
Tomography
Henrik Engblom, MD, PhD (Lund University, Skane University Hospital, Department of Clinical
Sciences Lund, Clinical Physiology, Lund, Sweden)
### SATURDAY 3 FEBRUARY

<table>
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<th>Time</th>
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| 08:12 - 08:24 | The relative contributions of myocardial perfusion, blood volume and extracellular volume to native T1 and native T2 at rest and during adenosine stress in normal physiology  
Jannike Nickander, MD (Karolinska Institutet) |
| 08:24 - 08:36 | Prognostic and incremental value of individual components of a cardiovascular magnetic resonance examination in patients with suspected ischaemic heart disease: long-term follow-up of CE-MARC  
Peter Swoboda, PhD (University of Leeds) |
| 08:36 - 08:48 | Gender Difference in Response to Adenosine Stress Perfusion CMR  
Louise Brown, MBChB, BMedSc (University of Leeds) |
| 08:48 - 09:00 | Prognosis and Cardiac function Outcome in Spontaneous Coronary Artery Dissection; SCAD UK study  
Ahmed Abdelaty, MSc MRCP (University of Leicester, UK) |
| 09:00 - 09:12 | Cereoid-Induced Apoptosis of Siderophage-Derived Foam Cells Underlies the Perpetual Recruitment of Macrophages and Expansion of “Death Zone” in Hemorrhagic Myocardial Infarctions  
Ivan Cokic, MD (Cedars-Sinai Medical Center) |
| 09:12 - 09:25 | Gadolinium-free Cardiac MRI Stress T1-mapping accurately diagnoses and differentiates between obstructive epicardial coronary artery disease and microvascular dysfunction  
Alexander Liu, MBBS BSc (University of Oxford) |

#### 08:00 - 09:25

**Focus Session 5**

**Right Ventricle Evaluation**

*Chairs:* Gabriela Guzman, MD, PhD (University Hospital La Paz)  
Monica Mukherjee, MD, MPH (Johns Hopkins University School of Medicine)

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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| 08:00 - 08:15 | How to acquire, post-process and interpret right ventricle images  
Stefan Zimmerman, MD (Johns Hopkins University School of Medicine) |
| 08:15 - 08:25 | Hemodynamic forces in the left and right ventricles of the human heart using 4D flow magnetic resonance imaging: phantom validation and reproducibility  
Johannes Töger, PhD (Lund University, Skåne University Hospital) |
| 08:25 - 08:35 | Tissue-Based Determinants of Right Ventricular Dysfunction in Ischemic Mitral Regurgitation – Incremental Utility of Non-ischemic Fibrosis Beyond CMR Evidenced Ischemia and Infarction Burden  
Jiwon Kim, MD (Weill Cornell Medical College) |
| 08:35 - 08:45 | The relationship between pulmonary artery-right ventricle coupling and right ventricle remodeling in untreated pulmonary artery hypertension patients  
Yang Dong, BMsci (Cardiology Department West China Hospital Sichuan University) |
08:45 - 08:55 The Right Ventricle in Aortic Stenosis: RV Hypercontractility assessed by CMR is an Early Marker of Clinical Decompensation and Cardiac Recovery in AS with Normal Left Ventricular Function
Marzia Rigolli, MBChB, MD (University of Oxford)

08:55 - 09:05 Prognostic Role of Cardiac Magnetic Resonance in Arrhythmogenic Right Ventricular Cardiomyopathy.
Giovanni Aquaro (Fondazione Toscana Gabriele Monasterio, Pisa (Italy))

09:05 - 09:15 Validation of right ventricular cardiac magnetic resonance feature tracking in patients with CTEPH (chronic thromboembolic pulmonary hypertension) after PEA (pulmonary endarterectomy)
Sabine Zitzmann, MD (Kerckhoff-Heart-Center, Department of Cardiology, Bad Nauheim, Germany)

09:15 - 09:25 Ventricular interaction at rest and during exercise in the pressure overloaded right heart: an exercise cardiac magnetic resonance study.
Mathias Claeys, MD (KU Leuven / University Hospitals Leuven)

08:00 - 08:20 CMR in the oncology patient
Iwan Harries, MD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

08:20 - 08:40 Intra cardiac and myocardial masses
John Grizzard, MD (VCU Health Systems)

08:40 - 09:00 Extra cardiac masses
Hugo Marques (Hospital da Luz)

09:00 - 09:20 Radiation and cytotoxic induced cardiomyopathy
Stephen Cheung, MBBS, FRCR (Queen Mary Hospital)
SATURDAY 3 FEBRUARY

08:00 - 09:25
Special Course 3

From 2D images to 3D models – Insights into the applications of 3D printing in cardiology - Session 1

Chairs: Silvia Schievano, PhD (UCL Institute of Cardiovascular Science & Great Ormond Street Hospital)
Giovanni Biglino, BEng, PhD (Bristol Heart Institute, School of Clinical Sciences, University of Bristol)

08:00 - 10:15
Level 2/3 case sessions

Pediatric/Congenital - Session 1

Chairs: Oliver Tann, MRCP, FRCR (Great Ormond Street Hospital)
Emanuela Valsangiacomo Buechel (University Childre’s Hospital Zurich)
Tobias Rutz (Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland.)

09:15 - 10:15
Outreach Session

Ischemic Heart Disease

Chairs: Hein Verberne, (University of Amsterdam, Amsterdam, the Netherlands)
Pierre Croisille, MD PhD (University of Lyon)

09:15 - 09:30 Functional testing versus anatomic imaging for initial diagnosis of CAD
Rasha Al-Lamee, MB BS MA (Imperial College Healthcare NHS Trust)

09:30 - 09:45 Ischemia and viability to guide revascularization
Andrew Arai, MD (National Heart, Lung and Blood Institute, National Institutes of Health)

09:45 - 10:00 Hybrid Imaging
Paul Knaapen, Paul (VUMC)

10:00 - 10:15 Discussion
SATURDAY 3 FEBRUARY

09:30 - 10:15
Short Lecture 4
A joint session with the Asian Society of Cardiovascular Imaging (ASCI)

Function and Structural Analysis

Chairs: Christopher Nguyen, PhD (Cedars-Sinai Medical Center)
Carmen Chan, FRCP (Queen Mary Hospital)

09:30 - 09:45 Left Ventricular Microstructure to Macrostructure: Which scale matters?
Daniel Ennis, PhD (Department of Radiological Sciences, University of California, Los Angeles, CA, USA.)

09:45 - 10:00 Cardiac function: What more can we learn from strain?
Frank Rademakers, MD, PhD (KU Leuven)

10:00 - 10:15 Feature Tracking: CINE is routine everywhere, is feature tracking ready for the clinic?
Kan Hor, MD (Nationwide Children’s Hospital)

09:30 - 10:15
Didactic Case Session 4

Congenital/Pediatrics

Chairs: Anne Marie Valente, MD (Harvard Medical School)
Adam Dorfman, MD (University of Michigan)

09:30 - 09:53 CMR calculation of Qp/Qs guides management
Andrew Powell, M.D. (Harvard Medical School and Boston Children’s Hospital)
Aurelio Secinaro, MD (Bambino Gesù Children’s Hospital and Research Institute, Rome. Italy)

09:53 - 10:15 Simple congenital heart defect - maybe not so simple after all?
Dan Halpern, Director, Adult Congenital Heart Disease Program (New York University Langone Health)
Sonya Babu-Narayan, FRCP PhD (Royal Brompton Hospital)

09:30 - 10:15
Quick Fire Session 3

Clinical

Chairs: Gabriela Liberato, MD (Sao Lucas Diagnostic Center)
Akhil Narang, MD (University of Chicago)

09:30 - 09:33 Clinical feasibility of 2-minute aortic 4D flow MRI: initial experience at two centers
Emilie Bollache, PhD (Northwestern University)
09:33 - 09:36 T1 mapping for the prediction of treatment response in AL amyloidosis
Rosario Perea Palazón, MD PhD (Hospital Clínic. Universitat de Barcelona)

09:36 - 09:39 Prognostic Utility of Blood Oxygen Level Dependent (BOLD) Cardiovascular Magnetic Resonance (CMR) imaging in Asymptomatic Chronic Kidney Disease (CKD) Patients with and without Diabetes Mellitus.
Ranjit Shah, MBBS, FRACP (South Australian Health and Medical Research Institute, Adelaide, SA, Australia)

Li-Yueh Hsu, DSc (National Heart, Lung and Blood Institute, National Institutes of Health)

09:45 - 09:48 Phenotype development in Cardiac Fabry disease proceeds through four stages: a prospective 182-patient study
Sabrina Nordin, MRCP (Barts Heart Centre)

09:48 - 09:51 When criteria for ICD implantation in the primary prevention of sudden death among patients with hypertrophic cardiomyopathy don’t get along: an analysis of late gadolinium-enhancement and the European and American guidelines
Pedro Freitas (Hospital de Santa Cruz)

09:51 - 09:54 Obesity paradox and myocardial injury by cardiac magnetic resonance imaging in ST-elevation myocardial infarction
Georg Fuernau, MD (University Heart Center Lübeck)

09:54 - 09:57 Importance of operator training and rest perfusion on the diagnostic accuracy of stress perfusion CMR
Adriana Villa, MD (King’s College London)

10:00 - 10:03 Diffuse interstitial fibrosis is associated with reduced myocardial strain in heart failure with preserved and reduced ejection fraction
Xiaodan Zhao, PhD (National Heart Centre Singapore)

10:03 - 10:06 Clinical Impact of Magnetic Resonance Imaging in Non-Approved Cardiac Devices
Ibrahim Saeed, MD (Saint Luke’s Mid-America Heart Institute)

10:06 - 10:09 The Short-Term Prognosis Values of combined T1 Mapping and Feature Tracking by Cardiovascular Magnetic Resonance in Dilated Cardiomyopathy
Hui Liu, M.D. (Guangdong General Hospital, Guangdong Academy of Medical Sciences)

10:09 - 10:12 Impact of aortic geometrical characteristics on abnormal flow pattern in the proximal descending aorta in Marfan patients: a 4D flow MRI study
Andrea Guala, (Hospital Universitari Vall d’Hebron. Vall d’Hebron Institut de Recerca. Universitat Autònoma de Barcelona)
09:30 - 10:10
Technologist Track Session 7

Oral Abstracts

Chairs:  Stephen Darty, BSRT (Duke University)
Jennifer Bryant, PhD (National Heart Centre Singapore)

09:30 - 09:40  CMR in Children under General Anaesthesia: A Single Institutional Experience
Rick Wage, DCR (R) (Royal Brompton Hospital NHS trust)

09:40 - 09:50  Left Atrial Appendage Mass – Thrombus or Myxoma?
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

09:50 - 10:00  The thinking technologist’s guide to investigating ventricular tachycardia
Bao Ru Leong, BSc (National Heart Centre Singapore)

10:00 - 10:10  Live detection of left atrial appendage thrombi in cardiac amyloidosis: an emerging clinical problem
Sarah Anderson, (UCL Department of Cardiac MRI)

10:15 - 11:00
EXHIBITION HALL (EPOSTER STATION 1)

Moderated ePoster Session 10

New Techniques in CMR

Chairs:  Claudia Prieto, PhD (King’s College London)
Raymond Kim, MD (Duke University Medical Center)

10:15 - 10:23  Diffusion tensor cardiovascular magnetic resonance assessment of recovered dilated cardiomyopathy
Zohya Khalique, MBBS (NIHR Cardiovascular Biomedical Research Unit, Royal Brompton Hospital)

10:23 - 10:31  Comprehensive 3D Cine Steady-state Free Precession and 3D Cine Phase Contrast Cardiovascular Magnetic Resonance Examination
Mehdi H. Moghari, PhD. (Harvard Medical School and Boston Children’s Hospital)

10:31 - 10:39  3D SASHA myocardial T1 mapping with high accuracy and improved precision
Giovanna Nordio, Biomedical Engineering (King’s College London)

10:39 - 10:47  Whole-heart k-t PCA accelerated multi-venc 4D Flow CMR - a study in 45 healthy volunteers
Jan Robert Kroeger, (University Hospital Cologne)

10:47 - 10:55  BART and Gadgetron Integration used for Real-Time Cardiac Cine Reconstruction
Mahamadou Diakite, PhD (National Institutes of Health)
**SATURDAY 3 FEBRUARY**

**10:15 - 11:00**

**EXHIBITION HALL (EPOSTER STATION 2)**

**Moderated ePoster Session 11**

**Postprocessing and Workflow in CMR**

**Chairs:**
Stephen Cheung, MBBS, FRCR (Queen Mary Hospital)  
Martin Ugander, MD, PhD (Karolinska Institutet, and Karolinska University Hospital, Stockholm, Sweden)

**10:15 - 10:23**
**A Quality Assurance Program for Standardizing T1-mapping for International Multicentre Studies - A Hypertrophic Cardiomyopathy (HCMR) Sub-Study**
Qiang Zhang, PhD (University of Oxford Centre for Clinical Magnetic Resonance Research)

**10:23 - 10:31**
**Automatic Quantification of Pulse Wave Velocity: Application for population-based CMR studies.**
Rahil Shahzad, PhD (Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands)

**10:31 - 10:39**
**Physiological and clinical relevance of left atrial strain measured by feature-tracking magnetic resonance imaging in a large group of Chinese healthy volunteers and patients**
Weihao Li, BMSci (Cardiology Division, West China Hospital, Sichuan University)

**10:39 - 10:47**
**T1 and T2 mapping at rest and stress for ischemic and scar detection in coronary artery disease: external validation in an independent cohort**
Elen Elen, MD, FIHA (National Cardiovascular Center Harapan Kita, Jakarta-Indonesia; Institute for Experimental and Translational Cardiovascular Imaging, University Hospital Frankfurt-Germany)

**10:47 - 10:55**
**We don’t know how to measure wall thickness in HCM – Time for a guideline?**
Gabriella Captur, MD PhD MRCP MSc (Barts Heart Centre)

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**10:15 - 11:00**

**EXHIBITION HALL (EPOSTER STATION 3)**

**Moderated ePoster Session 12**

**Vascular and Valvular MRI**

**Chairs:**
Kate Hanneman, MD (University of Toronto)  
Elie Mousseaux, MD, PhD (European Hospital Georges Pompidou APHP; INSERM U970 PARCC Paris descartes University)

**10:15 - 10:23**
**Blood pressure reduction with six months of exercise training is mediated by changes in proximal but not distal aortic stiffness as assessed by CMR**
Anish Bhuva, MRCP MBBS (Barts Heart Centre and Institute of Cardiovascular Science, UCL)

**10:23 - 10:31**
**Aortic wall motion is critical to accurately simulate fluid dynamics at the aortic arch**
Ramon Pons Cots, Grade in Chemical Engineering, Master in Chemical Engineering (Institut Quimic de Sarrià (IQS))


**SATURDAY 3 FEBRUARY**

10:31 - 10:39  Automated 3D CMR aortic morphometry demonstrates the enhanced value of volume indices as compared to diameters in hypertension and aneurysmal aortic diseases  
Thomas Dietenbeck, PhD (Sorbonne Universités)

10:39 - 10:47  Does raphe in bicuspid aortic valve have an impact on flow dynamics in the ascending aorta?  
Aroa Ruiz-Muñoz, MSc (Hospital Universitari Vall d’Hebron. Vall d’Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

10:47 - 10:55  Value of cardiac MRI for assessment of aneurysm of the ascending aorta in patients with aortic valve Insufficiency  
Ellianna Hoff (Sharon Regional Health System)

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**10:15 - 11:00**  
**EXHIBITION HALL (ECASE STATION 4)**  
**Moderated eCase Session 4**

**Masses**

*Chairs:*
- Gabriella Captur, MD PhD MRCP MSc (Barts Heart Centre)  
- Jonathan Weinsaft, MD (Weill Cornell Medical Center)

10:15 - 10:23  Asymmetrical thickening of the left ventricular wall  
Wooi Kok Lim, MD(BSM), MRCPCH(UK) (Sarawak Heart Centre, Kota Samarahan, Sarawak, Malaysia)

10:23 - 10:31  Risk of Embolization of Left Atrial Myxoma associated with Carney’s Complex  
Bharath Sathya, MD (National Institutes of Health/NHLBI)

10:31 - 10:39  Unusual ‘tumor’ of the mitral valve presenting with multiple territory cardio-embolic brain infarction  
Joseph Lembo, DO (Hartford Hospital)

10:39 - 10:47  Obstructive cardiac tumor with a capsule: fibroma or rhabdomyoma?  
Barbara Burkhardt, M.D. (Dept. of Pediatrics, UT Southwestern Medical Center)

10:47 - 10:55  Intracardiac Cyst: A Mistaken Identity  
Eileen Gajo, BS, MD (University of Chicago (NorthShore), Evanston Hospital)

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**11:00 - 11:45**  
**PLENARY ROOM**  
**Outreach Session**  
**Inflammatory Heart Disease - Multisystem Diseases**

*Chairs:*
- Ntobeko Ntusi, MD DPhil (University of Cape Town and Groote Schuur Hospital)  
- Theodoros Karamitsos, MD, PhD (1st Cardiology Department, Aristotle University of Thessaloniki, AHEPA Hospital)
### SATURDAY 3 FEBRUARY

**11:00 - 11:12  Systemic vasculitis involvement of the heart**  
Iacopo Carbone, Medicine (Policlinico Umberto I, Sapienza University of Rome)

**11:12 - 11:24  Myocardial manifestations and diagnosis of systemic sclerosis**  
Joao Lima, MD, MBA (Johns Hopkins University)

**11:24 - 11:36  How can CMR change outcomes in rheumatologic multisystem diseases**  
Sophie Mavrogeni, MD, PhD (Onassis Cardiac Surgery Center)

**11:36 - 11:45  Discussion**

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### LECTURE ROOM  
**LECTURE ROOM**  
**11:00 - 12:30**  
**Lecture Session 6**  
**New Techniques in Development**

*Chairs:*  
Reza Nezafat, PhD (Department of Medicine (Cardiovascular Division) Beth Israel Deaconess Medical Center, Harvard Medical School)  
Timothy Albert, MD, FACC (Tanner Health System)

**11:00 - 11:15  CMR auto-segmentation - When the circle drawing can stop?**  
Arash Kheradvar, MD, PhD (University of California, Irvine)

**11:15 - 11:30  CMR with Ferumoxytol - Where do we stand?**  
Paul Finn, MD (Departments of Radiology, Medicine and Biomedical Physics, UCLA)

**11:30 - 11:45  Non-Contrast Myocardial Scar Imaging: Promises and challenges**  
Moriel Vandsburger, PhD (University of California, Berkeley)

**11:45 - 12:00  Synthetic CMR and CMR Fingerprinting**  
Nicole Seiberlich, PhD. (Case Western Reserve University)

**12:00 - 12:15  Free breathing Multi-Dimensional CMR**  
Anthony Christodoulou, PhD (Cedars-Sinai Medical Center)

**12:15 - 12:30  Discussion**

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### CASE ROOM  
**CASE ROOM**  
**Level 1 Track**  
**11:00 - 12:30**  
**Case Session 6**  
**Pediatric and Congenital Heart Disease**

*Chairs:*  
Willem Helbing, MD, PhD (Department of Pediatrics, division of Pediatric Cardiology, Erasmus Medical Center, Rotterdam, the Netherlands)  
Ruchira Garg, MD FACC FASE (Cedars-Sinai Medical Center)

**11:00 - 11:10  4D Flow in Pediatric and Congenital Heart Disease**  
Mark Fogel, MD (Children’s Hospital of Philadelphia)
11:10 - 11:20  Advances in prediction of interventional outcome in univentricular hearts
Petter Frieberg, MD, MSc (Lund University, Department of Clinical Sciences Lund, Clinical Physiology, Skane University Hospital, Lund, Sweden)

11:20 - 11:30  3D “modeling” and “printing” based on MR and CT data in neonate with complex twisted heart: new frontier for clinical decision and optimal surgical approach
Aurelio Secinaro, MD (Bambino Gesù Children's Hospital and Research Institute, Rome, Italy)

11:30 - 11:40  Regadenoson myocardial stress perfusion CMR in a 2-month-old with transposition of the great arteries status post arterial switch with left coronary obstruction
James Wilkinson, MD (Texas Children's Hospital, Baylor College of Medicine)

11:40 - 11:50  Could CMR guide the surgical plan in patients with transposition of the great arteries?
Mahmoud Shaaban, MBBCh, MSc. (Aswan Heart Center (Magdi Yacoub Foundation) - Cardiology department, Tanta University)

11:50 - 12:00  Optimizing 3D whole heart imaging in complex congenital heart disease: ferumoxytol and respiratory suspension
Wilson King, MD (Saint Louis University)

12:00 - 12:10  A bump in the road - what is this arch?
Nilanjana Misra, MBBS, FAAP (Cohen Children’s Medical Center of NY)

12:10 - 12:20  Utilization of 4D Flow for evaluation of adult congenital heart disease: a case of congenital pulmonary atresia status post repair
Melany Atkins, MD (Fairfax Radiological Consultants, Inova Fairfax Hospital)

12:20 - 12:30  What cardiovascular magnetic resonance adds in congenital heart disease
Rachel Wald, MD FRCPC (Joint Department of Medical Imaging)

11:00 - 12:30  ROOM 4
Oral Abstract Session 6
CMR and Arrhythmias

Chairs: Esther Pérez-David, MD PhD (Hospital Gregorio Marañón, Madrid, Spain)
Kanishka Ratnayaka, MD (Rady Children’s Hospital)

11:00 - 11:12  CMR-derived circumferential strain measures and the risk of ventricular arrhythmia in patients with prior myocardial infarction and implantable cardioverter defibrillator
Elisabeth Paiman, MD (Department of Radiology, Leiden University Medical Center)

11:12 - 11:24  Risk Stratification of Patients with Apparently Idiopathic Premature Ventricular Contractions: Data from a Multicenter International Cardiac Magnetic Resonance Study
Gaetano Nucifora, MD, PhD (University Hospital of South Manchester)

11:24 - 11:36  Recovery of left ventricular function with CRT. Is it enough to protect from arrhythmic events?
Adelina Doltra, MD, PhD (Hospital Clínic de Barcelona)
SATURDAY 3 FEBRUARY

11:36 - 11:48 MRI DENSE Strain Predicts Long-Term Survival and ICD Therapies with CRT Defibrillators
Kenneth Bilchick, MD, MS (University of Virginia Health System)

11:48 - 12:00 Prevalence of myocardial scar and myocardial inflammation in patients with sustained and non-sustained ventricular arrhythmias: A cardiac magnetic resonance and 18F-FDG cardiac PET study
Kalie Kebed, MD (University of Chicago)

12:00 - 12:12 Atrial Scar on CMR to Predict Pulmonary Vein Reconnection after Catheter Ablation for Paroxysmal Atrial Fibrillation
Hubert Cochet, (IHU LIRYC - CHU / Université de Bordeaux)

12:12 - 12:25 Mind the Gap: Insights into Recurrent Atrial Fibrillation Post Cryoablation with Novel Cylindrical Navigator and 3-Tesla Imaging
Ibrahim Saeed, MD (Saint Luke’s Mid-America Heart Institute)

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11:00 - 12:30
Focus Session 6

Coronary Imaging: The Last Frontier

Chairs: Qi Yang, PhD (Cedars-Sinai Medical Center)
         Rene Botnar, PhD (King’s College London)

11:00 - 11:20 Imaging the coronaries with CMR: where do we stand?
Debiao Li, PhD (Cedars-Sinai Medical Center)

Ioannis Koktzoglou, PhD (NorthShore University HealthSystem)

11:30 - 11:40 3D whole-heart free-breathing coronary lumen and vessel wall imaging with interleaved T2prep-IR
Giorgia Milotta, MSc (King’s College London)

Gabriele Bonanno, PhD (Division of Cardiology and Division of MR Research, The Johns Hopkins University School of Medicine, Baltimore, MD, United States)

11:50 - 12:00 T2-Prepared Multidimensional Outer Volume Suppression for Coronary Imaging
David Zeng, MS (Stanford University)

12:00 - 12:10 Subclinical Coronary Atherosclerosis in Young Women: Magnetic Resonance Coronary Vessel Wall Imaging as a Predictor of Coronary Plaque Burden
Khaled Abd-Elmoniem, PhD, MHS (National Institutes of Health)
12:10 - 12:20  Association of regional and systemic adipose tissue with coronary endothelial dysfunction in patients with HIV
Sahar Soleimanifard, PhD (The Johns Hopkins Univeristy School of Medicine)

12:20 - 12:30  Motion-resolved free-breathing coronary MRA in heart transplant recipients at 3T
Jessica Bastiaansen, PhD (Department of Radiology, University Hospital (CHUV) and University of Lausanne (UNIL))

11:00 - 12:30  
**Technologist Track Session 8**
*A joint session with the Heart Rhythm Society (HRS)*

Electrophysiology

*Chairs:* Michelle Walkdon, Bsc (hons) Diagnostic Radiography and PG Dip Radiology (MRI)
Nassir Marrouche, Nassir Marrouche (University of Utah Health)

11:00 - 11:20  CMR Assessment and Guidance in Atrial Fibrillation
Nassir Marrouche, Nassir Marrouche (University of Utah Health)

11:20 - 11:40  Non-contrast methods to evaluate the myocardium in tachyarrhythmias
Rohan Wijesurendra, MBBS (University of Oxford)

11:40 - 12:00  Scanning the arrhythmic patient - ICD’s and PPM’s
Kanae Mukai, MD (Salinas Valley Memorial Health System)

12:00 - 12:20  CMR for patients undergoing CRT
Anish Bhuva, MRCP MBBS (Barts Heart Centre and Institute of Cardiovascular Science, UCL.)

11:00 - 13:15  
**Special Course 3**
*From 2D images to 3D models – Insights into the applications of 3D printing in cardiology - Session 2*

*Chairs:* Giovanni Biglino, BEng, PhD (Bristol Heart Institute, School of Clinical Sciences, University of Bristol)
Silvia Schievano, PhD (UCL Institute of Cardiovascular Science & Great Ormond Street Hospital)

11:00 - 13:15  
**Level 2/3 case sessions**

Pediatric/Congenital - Session 2

*Chairs:* Oliver Tann, MRCP, FRCR (Great Ormond Street Hospital)
SATURDAY 3 FEBRUARY

11:45 - 12:30  
Outreach Session  
Population Based Studies and Big Data  
Chairs:  Raymond Kwong, MD, MPH (Brigham and Womens Hospital)  
Christopher Kramer, MD (University of Virginia)  

11:45 - 11:57  Big Data Analytics at the Cardiac Atlas Project  
Avan Suinesiaputra, PhD (The University of Auckland, New Zealand)  

11:57 - 12:09  What we learned so far from the UK Biobank  
Steffen Petersen, MD DPhil MPH FRCP (Queen Mary University of London)  

12:09 - 12:21  Imaging databases and clinical trial remote collaborations  
Robert Judd, PhD (Duke University Medical center)  

12:21 - 12:30  Discussion  

12:30 - 13:30  
Guerbet Satellite Symposium  
Updates on Gadolinium Based Contrast Agents Usage in CMR  
Chairs:  Michael Campbell, MD, MHA (Duke University)  
Tim Leiner, MD, PhD (Utrecht University Medical Center)  

12:30 - 12:42  Three decades of GBCA clinical experience  
Tim Leiner, MD, PhD (Utrecht University Medical Center)  

12:42 - 12:54  EMA Recommendations on GBCA Safety  
Alexander Radbruch, MD, JD (German Cancer Research Center)  

12:54 - 13:06  NIH Perspective on GBCA Safety  
Ashkan Malayeri, MD (NIH)  

13:06 - 13:18  Gadolinium-based contrast agents in pediatric MRI  
Michael Campbell, MD, MHA (Duke University)  

13:18 - 13:30  Discussion  

13:30 - 14:55  
Lecture Session 7  
Imaging in Cardio-Oncology  
Chairs:  David Sosnovik, MD (Harvard Medical School - Massachusetts General Hospital)  
W. Patricia Bandettini, MD (National Heart, Lung and Blood Institute, National Institutes of Health)  

13:30 - 13:45  Clinical perspective and scope of problem  
Sanjeev Francis, MD (Tufts University School of Medicine)
SATURDAY 3 FEBRUARY

13:45 - 14:00 Guidelines: Echo and MRI
Juan Carlos Plana (Baylor College of Medicine)

14:00 - 14:15 MRI in clinical Cardio-Oncology
Ana Barac, MD, PhD (Medstar Heart and Vascular Institute)

14:15 - 14:30 Research and experimental approaches
Greg Hundley, MD (Wake Forest University Health Sciences)

14:30 - 14:45 Molecular imaging in drug development
David Sosnovik, MD (Harvard Medical School - Massachusetts General Hospital)

14:45 - 14:55 Discussion

13:30 - 14:55 CASE ROOM
Case Session 7

Cardiac Masses

Chairs: Barbara Srichai, MD (Georgetown University School of Medicine)
Massimo Lombardi, Cardiologist and Radiologist (II.R.C.C.S., Policlinico San Donato)

13:30 - 13:40 A recommended CMR protocol for assessment of cardiac masses
Jonathan Weinsaft, MD (Weill Cornell Medical Center)

13:40 - 13:50 Intracardiac bronchogenic cyst
Patrick Norton, MD (University of Virginia)

13:50 - 14:00 Primary cardiac lymphoma. A CMR clue to recognize it.
Bianca Granados-Pinedo, MD (American British Cowdray Medical Center)

14:00 - 14:10 Growing from within: dyspnea due to progressive stenosis of multiple heart vessels
Filipa Valente, MD (Hospital Universitari Vall d’Hebron. Vall d’Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

14:10 - 14:20 All left ventricular hypertrophies are not created equal: a case of left ventricular metastasis from breast cancer.
Alessandra Scatteia, MD (Division of Cardiology, Ospedale Medico-Chirurgico Accreditato Villa dei Fiori, Acerra, Naples, Italy)

14:20 - 14:30 When the heart knows first: high grade neuroendocrine carcinoma of the heart.
Jitka Starekova, MD (University Medical Center Hamburg-Eppendorf (UKE))

14:30 - 14:40 Approaching to the Etiology of a Right Ventricle Mass with Cardiac Magnetic Resonance
Katia Menacho, MD (Barts Heart Centre)

14:40 - 14:50 Comprehensive cardiovascular magnetic resonance for isolated cardiac cyst
Anna Giulia Pavon, Cardio-Thoracic Vascular Department, San Raffaele Hospital, Milan, Italy (Cardiac MR Center-Cardiologiy Unit-University Hospital-CHUV-Lausanne, Switzerland)

14:45 - 14:55 A mass was found during echocardiography: can CMR help?
Ron Jacob, Ron Jacob MD, FACC, FASE, FSCCT (PENN Medicine)
13:30 - 14:55
Oral Abstract Session 7
A joint session with the Society for Magnetic Resonance Angiography (SMRA)

CMR in Valvular and Vascular Diseases

Chairs: Michael Markl, PhD (Northwestern University)
Vassilis Vassiliou, MBBS, PhD (Norwich Medical School and Royal Brompton Hospital)

13:30 - 13:42 Regional wall shear stress analysis in the aortic arch and its relation to dilation in bicuspid aortic valve disease
Aroa Ruiz-Muñoz, MSc (Hospital Universitari Vall d’Hebron. Vall d’Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

13:42 - 13:54 Hemodynamic flow changes in bicuspid aortic valve aortopathy are stable over time
Malenka Bissell, Md, DPhil (Oxford University)

13:54 - 14:06 Progression of Myocardial Fibrosis in Aortic Stenosis: A Multicentre Cardiac Magnetic Resonance Study
Russell Everett, Bsc MD (University of Edinburgh)

14:06 - 14:18 Correlation of 4D flow MRI aortic wall shear stress to medial elastin fiber thinning in patients with a bicuspid aortic valve
Emilie Bollache, PhD (Northwestern University)

14:18 - 14:30 CMR Longitudinal Strain Analysis in Aortic Stenosis
Nick Spath, Bsc MD (University of Edinburgh)

14:30 - 14:42 Real-time flow using a golden-angle spiral acquisition
Rajiv Ramasawmy, PhD (National Institutes of Health)

14:42 - 14:55 In Vivo Quantification of Aortic Stiffness in Abdominal Aortic Aneurysm Patients: A Longitudinal Study
Huiming Dong, MS (The Ohio State University Wexner Medical Center)

13:30 - 14:55
Focus Session 7

Added Value of CMR in a Multimodality Imaging Scenario

Chairs: Edward Martin, MD (Oklahoma Heart Institute)
Yu-Cheng Cheng, MD (West China Hospital, Sichuan University)

13:30 - 13:45 How to succesfully implement a CMR program
Christoph Tillmanns, MD (Diagnostikum Berlin)

13:45 - 13:55 MRI DENSE Strain Imaging Provides a Superior Assessment for CRT Response Compared with 3D Echocardiography
Kenneth Bilchick, MD, MS (University of Virginia Health System)
13:55 - 14:05 Cardiac Magnetic Resonance Imaging and Cardiac Computed Tomography versus Transesophageal Echocardiography for the Diagnosis of Left Atrial Appendage Thrombus: A Systematic Review and Meta-analysis
Tasnim Vira, MD (Sunnybrook Health Sciences Centre)

14:05 - 14:15 Cardiovascular Magnetic Resonance Imaging to guide Transcatheter Aortic Valve Replacement: A Comparison with Computed Tomography
Agnes Mayr, MD (University Clinic of Radiology, Medical University of Innsbruck)

14:15 - 14:25 Progression of aneurysm of the ascending aorta: A CMR perspective
Sebastian Boland, MBA (Sharon Regional Health System)

14:25 - 14:35 The diagnostic value of Adenosine MR following a positive Coronary Calcium Score as a gatekeeper of invasive coronary angiography in 644 patients with stable chest pain.
Dorine Rijlaarsdam-Hermsen, (HMC Bronovo, Erasmus mc)

14:35 - 14:45 Is there a role for cardiac MRI stress imaging after an abnormal SPECT study?
Rohith Raghavendran, BS (Sharon Regional Health System)

14:45 - 14:55 CMR Provides Superior Accuracy and Reduced Heterogeneity for Detecting Coronary Artery Disease: A Systematic Review and Meta-Analysis of Stress Imaging Methods using HSROC Methods in 23,051 Patients.
Lilia Sierra-Galan, MD, MCvT (American British Cowdray Medical Center)

13:30 - 14:55 Best Moderated ePoster Session

Chairs: Sebastian Kozerke, PhD (ETH Zurich)
Jeanette Schulz-Menger, MD (Charité University Medicine Berlin and Helios Clinics)
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

13:30 - 14:55 Technologist Track Session 9

Congenital 1

Chairs: Stephen Darty, BSRT (Duke University)
Wendy Norman, DCR(R), DRI (Institute of Cardiovascular Science, University College London)

13:30 - 13:50 Transposition of the Great Arteries
Gergely Szantho, MD (University Hospital of Wales - Cardiff, Cardio-Thoracic Department and Hospitals Bristol - Heart Institute)

13:50 - 14:10 Congenital and surgical shunts
Giuseppe Muscogiuri, MD (Bambino Gesù Children’s Hospital and Research Institute, Rome. Italy)
SATURDAY 3 FEBRUARY

14:10 - 14:30  Tetralogy of Fallot
   Anne Marie Valente, MD (Harvard Medical School)

14:30 - 14:50  The Single Ventricle Heart
   Jason Johnson, MD MHS (LeBonheur Children’s Hospital, University of Tennessee)

15:00 - 15:45  Short Lecture 5
   LECTURE ROOM  Level 1 Track

MRI viability How and Why

Chairs:  Albert van Rossum, Prof. dr. (VU University Medical Center)
         Yuchi Han, MD, MMSc (University of Pennsylvania)

15:00 - 15:15  Impact of viability to guide CTO and select CRT
   Dipan Shah, MD, FACC (Houston Methodist DeBakey Heart & Vascular Center)

15:15 - 15:30  LGE is the optimal method for viability
   Raymond Kim, MD (Duke University Medical Center)

15:30 - 15:45  Dobutamine Stress should be added to all viability studies
   Grigorios Korosoglou, (GRN Academic Teaching Hospital Weinheim)

15:00 - 15:45  Didactic Case Session 5
   CASE ROOM  Level 1 Track

Ischemic vs. Nonischemic Cardiomyopathy - Will CMR Provide the Best Answer?

Chairs:  Orlando Simonetti, PhD (The Ohio State University)
         Pankaj Garg, MD, PhD (University of Leeds, UK)

15:00 - 15:23  Severe LV impairment? CMR will answer the question
   Louise Brown, MBChB, BMedSc (University of Leeds)
   John Paul Carpenter, MD(Res) FRCP (Poole Hospital NHS Foundation Trust)

15:23 - 15:45  Early cardiomyopathy detection: CMR evaluation of anatomy vs function
   David Bluemke, MD, PhD (University of Wisconsin School of Medicine and Public Health)
   Lindsay Griffin, MD (University of Wisconsin)
SUNDAY 4 FEBRUARY

15:00 - 15:45
Special Session 5

Tissue Characterization: Discuss with the Experts

Chairs: Matthias Friedrich, MD (McGill University Health Centre)
Jeanette Schulz-Menger, MD (Charité University Medicine Berlin and Helios Clinics)

15:00 - 15:45 Sequences, protocols and post-processing: what do you use in your routine and why?
Stefan Piechnik, PhD, MScEE (University of Oxford)

When to use native versus post-contrast T1 versus ECV?
Martin Ugander, MD, PhD (Karolinska Institutet, and Karolinska University Hospital, Stockholm, Sweden)

Is T1 and T2 mapping ready for routine clinical use?
Amit Patel, MD (University of Chicago)

15:00 - 15:45
Special Session 6

New Techniques Ready For Clinical Application

Chairs: Kelvin Chow, PhD (Siemens Medical Solutions USA, Inc.)
John Heitner, MD (New York Presbyterian-Brooklyn Methodist Hospital)

15:00 - 15:15 T1 and T2 mapping, 3D vs. 2D acquisition, validation, strengths and weaknesses
Peng Hu, PhD (UCLA)

15:15 - 15:30 Myocardial deformation, feature tracking, reproducibility, applications
Sebastian Kelle, MD, PhD (German Heart Center Berlin)

15:30 - 15:45 Fat-water separated imaging, mDixon vs. conventional fat imaging, clinical applications, accuracy
James Carr, MD (Northwestern University)

15:00 - 15:45
Best of SCMR Cases of the Week

Chairs: Vikas Rathi, MD (Bon Secours Health System)
Michael Campbell, MD, MHA (Duke University)

15:00 - 15:08 Invisible Cardiac Lesion
Anna Lisa Crowley, MD (Duke University)
SATURDAY 3 FEBRUARY

15:08 - 15:16 Intramyocardial hematoma mimicking hypertrophic cardiomyopathy—evaluation by multimodality imaging
Arun Dahiya, Griffith University, Queensland (RBWH and Logan Hospital, Queensland, Australia)

15:16 - 15:24 Unexpected Jeopardy: CMR in atypical chest pain but chronic aortic dissection with cardiac schwannoma
Runyawan Chotenimitkhun, MD, MsC

15:24 - 15:32 Lower extremity anasarca: long term complication of PAPVR
Jenifer Geradin, MD (Emory University, Atlanta Georgia USA)

15:32 - 15:40 Congenital malformation of the coronary drainage system and trabecular architecture
Stefania Rosmini, MD, PhD (Barts Heart Centre)

15:00 - 15:45
Technologist Track Session 10

Congenital 2

Chairs: Wendy Norman, DCR(R), DRI (Institute of Cardiovascular Science, University College London)
Stephen Darty, BSRT (Duke University)

15:00 - 15:10 Coronary Anomalies
Ben Holloway, MBChB FRCR (BSCI/BSCCT)

15:10 - 15:20 Ebstein’s Anomaly
Zahra Alizadeh Sani, (MD, Associate professor of cardiology, Rajaie Cardiovascular Medical & Research Centre, Tehran, Iran)

15:20 - 15:30 Congenital aortic arch anomalies
Bobby Agrawal, FRCS FRCR (Papworth Hospital)

15:30 - 15:40 Imaging the Pediatric Patient in the MRI environment: sedation and other strategies
Ahmed Kharabish, MSc, PhD (Bad Krozingen Heart Center, Freiburg University, Germany)

15:40 - 15:45 Closing Remarks
Stephen Darty, BSRT (Duke University)
SATURDAY 3 FEBRUARY

16:30 - 18:35
Closing Plenary

Chairs: Matthias Stuber, PhD (University of Lausanne)
       Steffen Petersen, MD DPhil MPH FRCP (Queen Mary University of London)

16:30 - 16:45 Keynote Lecture EACVI Section CMR: Myocardial plasticity, adaptation and maladaptation: insights from CMR
James Moon, MD (UCL)

16:45 - 17:30 CMR OSCARS - The Image Competition
Lilia Sierra-Galan, MD, MCvT (American British Cowdray Medical Center)
Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)
Rajesh Puranik, A/Prof (University of Sydney)
James Carr, MD (Northwestern University)
Ron Jacob, Ron Jacob MD, FACC, FASE, FSCCT (PENN Medicine)
Ntobeko Ntusi, MD DPhil (University of Cape Town and Groote Schuur Hospital)
Anne Marie Valente, MD (Harvard Medical School)
Juliana Serafim, MD (Hospital Pró-Cardiaco)
Mark Westwood, MBBS MD FRCP FESC (Barts)
Karen Ordovas, MD, MAS (University of California San Francisco)

17:30 - 17:45 Highlights from CMR2018
Juliano Fernandes, MD, PhD (Jose Michel Kalaf Research Institute)
Robin Nijveldt, MD, PhD (Radboudumc)

Chairs: Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)
       Matthias Friedrich, MD (McGill University Health Centre)

17:45 - 18:20 Awards Presentations and Incoming SCMR President

18:20 - 18:30 Closing Remarks
Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

18:35 - 19:00
Farewell Drink (in the Exhibition Hall)
FRIDAY 2 FEBRUARY

10:15 - 11:00
Poster Session 1

EXHIBITION HALL

P001 Impact of Diffuse Myocardial Fibrosis on Left Ventricular Dysfunction in Patient with Atrial Fibrillation. Evaluation with Cardiovascular Magnetic Resonance T1 mapping
Lei Zhao (Beijing Anzhen Hospital, Capital Medical University)

P002 Metallic Implants in the MRI Environment; Effect on Loops, Stimulators and Retained Pacemaker/ICD Leads
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

P003 Easy 2D measurements to predict left atrial sphericity in patients with paroxysmal atrial fibrillation
Albert Teis (Hospital Universitari Germans Trias. Badalona. Barcelona. Spain.)

P004 Left atrial blood flow dynamics and hemostasis after electrical cardioversion of atrial fibrillation
Merih Cibis, PhD (Linkoping University)

P005 Real-time cardiac cine using radial bSSFP sequence with trajectory auto-correction
Guoxi Xie, PhD (School of Basic Science, Guangzhou Medical University, Guangzhou, China; Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences)

P006 Substantial prevalence of a type II left ventricular contraction pattern by feature tracking CMR in patients with non-specific intraventricular conduction delay
Daniel Loewenstein (Karolinska Institutet)

P007 Image-based patient-specific simulations of atrial flow can predict regions of blood stasis in sinus rhythm and atrial fibrillation
Desmond Dillon-Murphy, PhD MSc (Kings College London)

P008 Feasibility of noncontrast T1 and T2 parametric mapping in assessment of acute ventricular ablation lesions in children
Laura Olivieri, M.D. (Children’s National Medical Center)

P009 Energy Loss and Kinetic Energy of the Left Ventricle in Patients with Paroxysmal Atrial Fibrillation
Julio Garcia, PhD (University of Calgary)

P010 Atrial fibrosis detected using LGE-MRI is a progression phenomenon accelerated by atrial fibrillation: Comparison between patients without and with Atrial fibrillation.
Christian Mahnkopf, MD (Klinikum Coburg, Dept. of Cardiology)

P011 Evaluation of Estimation Methods for Missing Premature Ventricular Contractile Beats During Real-Time CMR Slice Acquisition
Saharsh Dass, BS (University of Pennsylvania)

P012 Clinical and morpho-functional evaluation of young athletes with exercise-induced ventricular arrhythmias: a study performed by cardiac magnetic resonance
Alberto Cipriani, MD (Department of Cardiac, Thoracic and Vascular Sciences, University of Padova, Italy)
P014 Combined evaluation of aortic pulse wave velocity, epicardial fat volume, left ventricular strain and fibrosis in patients with hypertension and diabetes mellitus
Rami Homsi (University Hospital Bonn, Department of Radiology)

P015 Diagnostic Utility of Vasodilator Cardiac Magnetic Resonance Imaging in Patients with Reduced Left Ventricular Ejection Fraction
Akhil Narang, MD (University of Chicago)

P016 Left ventricular Performance in Takotsubo Syndrome and Aborted Myocardial Infarction: preliminary data of a prospective multicenter CMR study
Nadine Abanador-Kamper (Department of Cardiology, HELIOS Medical Center Wuppertal, University Hospital Witten/Herdecke, Wuppertal, Germany; Center for Clinical Medicine Witten/Herdecke University Faculty of Health, Wuppertal, Germany)

P017 How cardiac magnetic resonance imaging could help the differential diagnosis in MINOCA? - Single center data of a 5-year period
Hajnalka Vágó (Heart and Vascular Center of Semmelweis University)

P018 Utilization of Superparamagnetic Iron Oxide Contrast Agents for the Determination of Myocardial Adipose Inflammation Using T2 Star as a Marker for Coronary Artery Disease in HIV Positive Patients
Korey Haddox, D.O. (University of Cincinnati Medical Center)

P019 Machine Learning of 3D Myocardial Deformation from Cine MRI for the Identification of Segmental Viability in Patients with Ischemic Cardiomyopathy
Alessandro Satriano, PhD. (Stephenson Cardiac Imaging Centre, Libin Cardiovascular Institute of Alberta, University of Calgary)

P020 Regional function after acute myocardial infarction: strain analysis is superior to wall thickening in detecting microvascular injury
Henk Everaars (VU university medical center)

P021 When Ordered by LVEF, Internal and External Energy Expenditure Exhibit a Strong Periodicity in the Cardiovascular System; a New Paradigm?
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

P022 Characterization of Ischemic Cardiomyopathy with Water-Fat Separation via End-to-end Deep Learning
James Goldfarb, PhD (St Francis Hospital)

P023 Serum Uric Acid Level During Acute MI Modifies the Therapeutic Effects of High Dose Omega-3 Fatty Acids on Left Ventricular Remodeling
Kyoichi Kaneko, MD, PhD (Brigham and Women’s Hospital and Showa University)

P024 Cardiac magnetic resonance imaging to differentiate acute NSTEMI from acute ACS-like myocarditis
Enver Tahir, MD (University Medical Center Hamburg-Eppendorf)

P025 Dobutamine stress CMR out-performs LGE and adenosine in predicting CTO-PCI response (CARISMA-MA_CTO preliminary results)
Silvia Pica, MD (IRCCS Policlinico San Donato, Multimodality Imaging Center, Milan)
P026 Characterization of T2 and T2* relaxation and strain in disease progression post acute myocardial infarction
Nilesh Ghugre, PhD (Sunnybrook Research Institute, University of Toronto)

P027 Quantification of the area-at-risk by post-contrast T1 mapping and detection of intramyocardial hemorrhage by post-contrast T2* mapping in reperfused STEMI patients
Nazia Chowdhury, BSc (Cardiovascular and Metabolic Disorders Program, Duke-National University Singapore Medical School: National Heart Research Institute Singapore, National Heart Centre, Singapore)

P028 Prevalence of inducible ischaemia across the strata of ejection fraction and according to the pattern of late gadolinium enhancement
Pamela Brown, MBBS (University Hospital South Manchester)

P029 Spin-Spin Dephasing on Cine-CMR for Assessment of Blood Pool Stasis – A Novel Physiologic Marker for Post-Myocardial Infarction Left Ventricular Thrombus
Neil Mehta, MD (Weill Cornell Medical College)

P030 Relation of low-density lipoprotein cholesterol with microvascular injury and clinical outcome in revascularized ST-elevation myocardial infarction
Martin Reindl (University Clinic of Internal Medicine III, Cardiology and Angiology, Medical University of Innsbruck)

P031 Impact of atrial fibrillation during ST-elevation myocardial infarction on infarct characteristics and prognosis
Sebastian Reinstadler, MD (University Clinic of Internal Medicine III, Cardiology and Angiology, Medical University of Innsbruck)

P032 During vasodilatory stress, which hemodynamic indicator correlates best with myocardial perfusion as measured by first pass contrast enhanced cardiac MRI.
Richard Coulden, MB BS (University of Alberta Hospital)

P033 Inability of Iron-Loaded Macrophages to Switch from Glycolytic to Oxidative Phenotype Promotes Foam Cell Formation and Fat Deposition in Hemorrhagic MI: Early Findings from a PET/MRI Study with Histological Validation
Ivan Cokic, MD (Cedars-Sinai Medical Center)

P034 Impact of global and local left ventricular remodeling in severe ischemic mitral regurgitation
Fausto Pizzino (Fondazione Toscana Gabriele Monasterio and Scuola Superiore Sant’Anna di Pisa)

P035 Global Longitudinal Strain is reduced during maximum myocardial hyperaemia in patients with significant coronary artery disease.
Pankaj Garg, MD, PhD (University of Leeds, UK)

P036 Impact of a breathing-maneuver stimulus on myocardial oxygenation and left ventricular strain in patients with coronary artery disease
Barbara Spicher (Inselspital Bern, Anesthesia)

P037 Infarct healing during long-term follow-up after ST-elevation myocardial infarction
Hans-Josef Feistritzer, MD (University Clinic of Internal Medicine III, Cardiology and Angiology, Medical University of Innsbruck)
FRIDAY 2 FEBRUARY

P038 Feasibility Study of a Single Breath-hold, 3D mDIXON Pulse Sequence for Late Gadolinium Enhancement Imaging of Ischaemic Scar
James Foley, MBChB BSc (Hons) (University of Leeds)

P039 Safety of Regadenoson Stress Cardiac Magnetic Resonance Imaging in Heart Transplant Recipients
Felipe Kazmirczak, MD (University of Minnesota)

P040 Fluid-dynamic changes in post ischemic dilated cardiomyopathy before and after surgical ventricular restoration: an integrated methodological approach based on CMR 4D flow
Antonia Camporeale, MD (IRCCS Policlinico San Donato)

P041 Inter-study Reproducibility of Strain Assessed by Displacement Encoding with Stimulated Echoes (DENSE) and Feature-tracking in Patients post-Myocardial Infarction.
Kenneth Mangion, MD MRCP (University of Glasgow)

P042 Quantification of Late Gadolinium Enhancement with Contrast-enhanced Cardiovascular MR Imaging for Coronary Artery Chronic Total Occlusion
Wei Yu, MD,PhD (Department of Radiology, Anzhen Hospital, Capital Medical University)

P043 Diffuse myocardial fibrosis in heart failure with preserved and reduced ejection fraction assessed by CMR native T1 and extracellular volume fraction mapping on 3T
Xiaodan Zhao, PhD (National Heart Centre Singapore)

P044 T1 and T2 mapping of myocardium in Coronary Artery Bypass Grafting
John-Paul Tantiongco, BSc (Honous) BMBS (Flinders University)

P045 Females have higher myocardial blood flow, myocardial blood volume and myocardial extracellular volume compared to males - both at rest and during adenosine stress cardiovascular magnetic resonance
Jannike Nickander, MD (Karolinska Institutet)

P046 Prevalence of extracardiac findings on adenosine stress perfusion CMR in patients with preserved ejection fraction
Sohail Iqbal, MBBS (University Hospital South Manchester)

P047 Rest Perfusion Characteristics in Patients with Chronic Hemorrhagic Myocardial Infarctions: Early Findings
Eric Johnson (Biomedical Imaging Research Institute, Dept of Biomedical Sciences, Cedars-Sinai Medical Center)

P048 Left Atrial Longitudinal Strain by CMR Feature Tracking in ST Elevation Myocardial Infarction
Ariane Pacheco, MD (Heart Institute - InCor - University of São Paulo Medical School, São Paulo, Brazil)

P049 Personal Profiling using Genotyping and Metabolomics Markedly Accentuates Therapeutic Response of Omega-3 Fatty Acid on Post-AMI Remodeling – The OMEGA-REMODEL Randomized Multicenter Trial
Raymond Kwong, MD, MPH (Brigham and Womens Hospital)

Sören Backhaus, MD (Georg-August-University Göttingen Universitätsmedizin)
FRIDAY 2 FEBRUARY

P051 Prediction of infarct size and adverse cardiac outcomes by tissue tracking-cardiac magnetic resonance imaging in ST-segment elevation myocardial infarction
Yeonyee Yoon, MD (Seoul National University Bundang Hospital)

P052 Beyond the MagnaSafe Trial; Where Do We Go from Here? A Focus Beyond Simply CMR Safety
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

P053 Outcomes Prediction in PAH via the CardioMEMs Implantable Pulmonary Artery Device Integrated with CMR; Does CMR-Derived Emax have a Prognostic Role in Advanced PHTN?
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

P054 Long-term prognostic implications of previous silent myocardial infarction detected by cardiovascular magnetic resonance in patients presenting with first acute myocardial infarction
Raquel Amier, MD (VU University Medical Center)

P055 Prognostic value of midwall fibrosis in patients with preserved ejection fraction and structurally normal heart (pilot study)
Avirup Guha, MBBS, MD (Ohio State University)

P056 Treatment Effects of Chaperone Therapy with the Novel Oral Drug Migalastat on Cardiac Involvement in Fabry Disease
Jonas Müntze, MD (Department of Internal Medicine I and Comprehensive Heart Failure Center, University Hospital Wuerzburg)

P057 Incremental Value of Extracellular Volume measured by cardiac magnetic resonance to Predict Reverse Remodeling in New Onset Non-ischemic Dilated Cardiomyopathy
Weihao Li, BMSci (Cardiology Division, West China Hospital, Sichuan University)

P058 Effect of coffee consumption on cardiac structure and function from UK Biobank Imaging study
Kenneth Fung, MBBS MRCP (William Harvey Research Institute, NIHR Cardiovascular Biomedical Research Unit at Barts, Queen Mary University of London, Charterhouse Square, London, EC1M 6BQ, UK)

P059 Non-Alcoholic Fatty Liver Disease is Associated with Increased Epicardial Adipose Tissue and Impaired Cardiovascular Remodelling and Function
Ines Abdesselam, PhD (Oxford University)

P060 Cardiac Magnetic Resonance Myocardial Feature Tracking for Optimized Prediction of Cardiovascular Events Following Myocardial Infarction
Ingo Eitel, MD (University Heart Center Lübeck)

P061 The prognostic value of left ventricular strain assessed on cardiovascular magnetic resonance cine images in patients with light chain amyloidosis
Xiao Li (Peking Union Medical College Hospital)

P062 Early detection of cardiac structural and functional abnormalities in adult Myotonic Dystrophy Type 1 patients using advanced cardiac magnetic resonance imaging
Kavitha Abdul Razak (Logan Hospital, Meadowbrook, Australia)
P063  Pediatric hematopoietic stem cell transplantation (HSCT) late effects on cardiovascular function and myocardial tissue characteristics
Elisabeth Paiman, MD (Department of Radiology, Leiden University Medical Center, Leiden, The Netherlands)

P064  Left Ventricle Replacement fibrosis detected by Cardiac Magnetic Resonance (CMR) is associated with Major Adverse Cardiovascular Events (MACE) in Systemic Sclerosis Patients
Gilles Soulat, MD (European Hospital Georges Pompidou APHP; INSERM U970 PARCC Paris descartes University)

P065  Impact of Indexation Method and Body Mass Index on Prevalence of High Left Ventricular Mass: The Framingham Heart Study
Michael Chuang, MD, ScM (Beth Israel Deaconess Medical Center)

P066  Clinical Significance of Late Gadolinium Enhancement at Right Ventricular Insertion Point in Non-ischemic Dilated Cardiomyopathy Patients
Jin-Young Kim (Keimyung University Dongsan Medical Center)

P067  Long-term prognosis of acute myocarditis with chest pain: incidence and characteristics of recurrences
Esther Perez David, MD, PhD (Hospital Gregorio Maranon)

P068  Effects of the High Flow Arterio-venous Fistula on Right Ventricular Contractility in Hemodialysis Patients
Sheena Bhagirath (OLVG Teaching Hospital)

P069  Impact of Arterio-venous Fistula Flow on Ventricular Contractility in Hemodialysis Patients – a Cardiac Magnetic Resonance Study
Sheena Bhagirath (OLVG Teaching Hospital)

P070  CMR-Feature Tracking by Magnetic Resonance Imaging Post Cancer Therapy in Survivors of Hodgkin’s Lymphoma
Elizabeth Hillier, B.Sc., PhD Student (McGill University)

P071  Role of global circumferential strain in patients with myocarditis and normal ejection fraction assessed by CMR
Bostjan Berlot, MD (University Medical Centre Ljubljana)

P072  Cine-CMR Guided Predictive Model for Echocardiography-Based Assessment of Right Ventricular Remodeling – Validation of Novel Linear-Based Indices
Jiwon Kim, MD (Weill Cornell Medical College)

P073  Right ventricular strain quantification using Cardiac Magnetic Resonance with Multimodality Tissue Tracking in The Multi-Ethnic Study of Atherosclerosis (MESA) Chronic Obstructive Pulmonary Disease (COPD) study.
Michio Ozaki, BS,RT (Johns Hopkins University)

P074  Decision Support Software Ensures Appropriate Cost-Effective Use of Cardiac Magnetic Resonance
Christopher Francois, MD (University of Wisconsin - Madison)
FRIDAY 2 FEBRUARY

P075  MRI-guided catheterization in children and young adults with congenital heart disease using the pSAT sequence: Initial findings in diagnostic procedures.
Mari Nieves Velasco Forte, MBBS (Queen Elizabeth Hospital/King’s College London)

P076  Active metallic-braided catheters and metallic guidewires equipped with miniature resonant floating RF traps (MBaluns) for heat amelioration: Designs and Validation
Ehud Schmidt, PhD (Johns Hopkins University)

P077  Creatine chemical exchange saturation transfer (CrCEST) voxel and ROI-wise decay maps at 3T for the study of peripheral artery disease
Helen Sporkin, BS (University of Virginia)

P078  Determination of the Optimal Method for 31P-Cardiac MR Spectral Analysis
Anna Reid, MBChB (University Hospital of South Manchester)

P079  Weight Loss in Obesity is Associated with a Fall in the Creatine Kinase Rate Constant
Jennifer Rayner, BMBCh, MRCP(UK) (OCMR, University of Oxford)

P080  Metabolic Disease Impairs Response to Cardiac Rehabilitation – Insights from Skeletal Muscle Spectroscopy
Vidhya Kumar (Ohio State University)

P081  Translation of the Non-Invasive Measurement of Creatine Kinase Flux in Human Myocardium: from Bench to Magnet
Mark Peterzan, BSc (Hons) MRCP(UK) MA (University of Oxford)

P082  Cardiac ATP delivery rates in chronic severe mitral regurgitation
Mark Peterzan, BSc (Hons) MRCP(UK) MA (University of Oxford)

P083  Cardiac ATP delivery rates in chronic pressure overload
Mark Peterzan, BSc(Hons) MRCP(UK) MA (University of Oxford)

P084  ‘Crash diets’ cause acute impairment of cardiac function with associated myocardial lipid accumulation
Jennifer Rayner, BMBCh, MRCP(UK)(OCMR, University of Oxford)

P085  Myocardial triglyceride content and cardiac function in patients with left ventricular hypertrophy: comparison between severe aortic valve stenosis, hypertensive heart disease, and hypertrophic cardiomyopathy
Eiryu Sai, M.D., PhD. (Juntendo Tokyo Koto Geriatric Medical Center, Juntendo University Graduate School of Medicine)

P086  23Na MRI Reveals Altered Levels of Tissue Sodium Concentrations in Obese Teenagers
Marcus Kelm, M.D. (German Heart Center Berlin)

QF1-01 Stop drawing circles! Deep learning for automating volumetric analysis
Rhodri Davies (Barts Heart Centre, London, United Kingdom)
FRIDAY 2 FEBRUARY

QF1-02 Machine Learning Based Modelling of Segmental Native T1 Distribution to Classify Cardiomyopathy State in Patients with Unexplained Left Ventricular Hypertrophy
Mariam Narous (University of Alberta)

QF1-03 A novel acquisition strategy for Dark-Blood T1-TSE Imaging improves blood signal suppression, image sharpness, and overall clinical image quality
Wolfgang Rehwald (Siemens Healthineers and Duke Cardiovascular MR Center)

QF1-04 The importance of Magnetization Transfer on simulation-based quantitative Magnetic Resonance Imaging techniques
Christos Xanthis (Lund University, Skane University Hospital, Department of Clinical Physiology, Lund, Sweden)

QF1-05 Intramyocardial injections guided by active MR-tracking for regenerative therapy
Steven Wenker (Utrecht University Medical Center)

QF1-06 Quantitative Coronary Flow Imaging using Breath-hold Cine FISS Arterial Spin-Labeled MR Angiography
Robert Edelman (NorthShore University HealthSystem)

QF1-07 Toward Clinically-Practical Free-breathing Whole-Heart 3D Cine with Isotropic Resolution and High Contrast
Peng Lai (GE Healthcare)

QF1-08 Histone Deacetylase Expression in the Human Heart and Brown Adipose Tissue Imaged In Vivo with Simultaneous PET-MR of 11C-Martinostat
Choukri Mekkaoui (Harvard Medical School - Massachusetts General Hospital - Athinoula A. Martinos Center for Biomedical Imaging - Boston, MA)

QF1-09 Differential quantification of interstitial and dense myocardial fibrosis by high field MRI in a murine myocardial infarction model according to cardiac PW1 cell expression.
Khaoula Bouazizi (Institute of Cardiometabolism and Nutrition)

QF1-10 Prospective correction of patient-specific respiratory motion in T1 mapping
Michael Bush (The Ohio State University)

QF1-11 Deep Learning for Fully Automatic Contouring of the Left Ventricle in Cardiac T1 Mapping
Evan Hann (University of Oxford)

QF1-12 Comprehensive Evaluation of Global and Regional Macroscopic and Microscopic Myocardial Fibrosis by Cardiac MR: Intra-individual Comparison of Gadobutrol Versus Gadoterate Meglumine
James Carr (Northwestern University)

TP01 Alcohol Induced Tako-Tsubo Cardiomyopathy (TCM)
Chris Lawton, PGC, BSc (Bristol Heart Institute)

TP02 Arrhythmia: Image quality and new techniques
Joana Leal, BSc (Oxford Centre for Magnetic Resonance Research)
FRIDAY 2 FEBRUARY

TP03  Effects of non pacer ICD metallic implants in the CMR environment
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

TP04  Where Are You Going to Slice It? Our Look at Aortic Regurgitation
Ronald Williams, B.A. (Allegheny General Hospital)

WP01  CMR Strain Analysis during Breathing Maneuvers for the Detection of Single Vessel Coronary Artery Disease
Mohamad Rabbani, B.Sc., MDCM Candidate (McGill University)

WP02  Coronary Endothelial Function Testing using Continuous Cardiac ASL-CMR
Ahsan Javed, MS (University of Southern California)

WP03  Development of a stress-only perfusion gradient marker for detection of coronary microvascular dysfunction in women with no obstructive CAD: a new quantitative approach validated by invasively measured coronary reactivity
Zulma Sandoval, PhD (Cedars-Sinai Medical Center, Los Angeles)

WP04  Myocardial infarction with normal coronary arteries by coronary angiography and the relevance of cardiac magnetic resonance for its diagnostic classification.
Guadalupe Pérez Quintana, MD (Instituto Nacional de Cardiología Ignacio Chávez)

WP05  Optimal Flip Angle for Steady Pulsed Arterial Spin Labeled CMR
Hung Do, PhD (University of Southern California)

WP06  Robust motion correction of myocardial perfusion MRI data
Cian Scannell, BSc, MRes (King’s College London)

WP07  The Global Myocardial Oxygenation Response to Breathing Maneuvers is Reduced in a Non-Selective Cohort of Patients with Coronary Artery Disease
Giulia Vinco, MD (McGill University Health Centre, University of Verona)

15:45 - 16:30  EXHIBITION HALL
Poster Session 2

CP01  Gluten free diet to prevent myocardial infarction? How cardiac MRI solved the enigma
Soufiani Aida (Ibn Sina Hospital)

CP02  The vanishing coronary artery syndrome
Mihiri Wettasinghe, MBBS, MD (Radiology) (University Hospitals of Leicester NHS Trust)

CP03  Anterior STEMI – A lucky escape
Tushar Kotecha, MRCP (UK) MBChB (Royal Free London NHS Foundation Trust)
FRIDAY 2 FEBRUARY

CP04  Fatal outcome after myocardial infarction and pulmonary damage due to CS gas intoxication  
Saoussen Antit (Department of Cardiology, Interior Security Forces Hospital, La Marsa, Tunisia)

CP05  When big is bigger - a multimodality imaging case.  
Camilla Torlasco, MD (University of Milan-Bicocca. IRCCS Istituto Auxologico Italiano, Milan, Italy)

CP06  Delayed chemotherapy induced cardiomyopathy  
JAE SUP JUN (Department of Radiology, The Catholic University of Korea, Seoul St. Mary’s Hospital)

CP07  A case of Fabry’s disease misdiagnosed at its onset  
Rosario Perea Palazón, MD PhD (Hospital Clinic. Universitat de Barcelona)

CP08  A nice case (of a wrong diagnosis) of hypertrophic cardiomyopathy.  
Chrysanthos Grigoratos, MD (Institute of Life Sciences, Scuola Superiore Sant’Anna, Pisa, Italy)

CP09  Right ventricular sarcoidosis, mimic for arrhythmogenic right ventricular cardiomyopathy  
Nicholas Tadeo, MD (Aurora Health Care - Saint Luke’s Medical Center)

CP10  A case of Peripartum Cardiomyopathy and Autosomal Dominant Polycystic Kidney Disease  
Lucia Occhi, MD (ASST Grande Ospedale Metropolitano Niguarda)

CP11  Revealing the Unexpected: Cardiac Magnetic Resonance in the Diagnosis of Sinus of Valsalva Aneurysm  
Katia Menacho, MD (Barts Heart Centre)

CP12  A Rare Etiology Of Mitral Regurgitation Revealed By CMR  
Abdalla Elagha, Cairo university (cairo university)

CP13  Sever pulmonary stent stenosis after failed Ross procedure  
Gladys Juncà (Hospital Universitari Germans Trias i Pujol. Badelona. Barcelona)

CP14  Subvalvular left ventricular outflow tract aneurysm in the setting of remote bicuspid aortic valve endocarditis  
Thuy Nguyen, MD (University Hospitals Cleveland Medical Center)

CP15  Ferumoxytol-Enhanced MR Venography in End-Stage Renal Disease  
Puja Shahrourki, M.D. (Department of Radiology, David Geffen School of Medicine at UCLA)

CP16  Small & highly mobile cardiac masses: how to image?  
Riad Abou Zahr, MD (University of Texas Southwestern Medical Center UTSW)

CP17  A strange worm in the right heart...  
José Correia (Centro Hospitalar de Tondela Viseu EPE)

CP18  CMR and CT/PET Correlation in a Case of Metastatic Pancreatic Plasmacytoma  
Roshin Mathew, MD (University of Virginia Health System)

CP19  An incidental finding in a young female following a motor vehicle collision status post hysterectomy two weeks prior  
Rydhwana Hossain, MD (University of Maryland)
FRIDAY 2 FEBRUARY

CP20  An unusual case of asymmetrical ‘Left Ventricular Hypertrophy’
Emma Burnhope, BM, MRCP (King’s College, London)

CP21  Long term complications of the Takeuchi repair for Anomalous Left Coronary Artery off the Pulmonary Artery (ALCAPA)
Ranjini Srinivasan (National Institute of Health)

CP22  Three-Dimensional printed cardiac model in assisting surgical planning in Heterotaxy patient with complex systemic and pulmonary venous drainage
Arpit Agarwal, MD (University of Texas Medical School at Houston)

CP23  An Unusual Case of Tethered Right Coronary Cusp
Ranjini Srinivasan (National Institute of Health)

CP24  Right Superior Vena Cava Drainage into the Left Atrium Diagnosed in the Peripartum Period
Magdalena Janus, PhD, MD (1st Department of Cardiology, Poznan University of Medical Sciences)

CP25  A case of noonan’s syndrome: hypertrophic cardiomyopathy in adulthood
Rola Khedraki, MD (Scripps Clinic)

P087  Improved CMR protocol for semi-quantitative assessment of myocardial stress perfusion in children
Shivani Patel, MBBS (Ann and Robert H Lurie Children’s Hospital of Chicago)

P088  Free-Breathing Retrospectively Cardiac Gated Balanced Steady-State Free Precession Cine Imaging: Evaluation of Clinical Performance in 100 Pediatric Patients
James Wilkinson, MD (Texas Children’s Hospital, Baylor College of Medicine)

P089  Statistical Shape Modeling of the Left Ventricle in Tetralogy of Fallot Using Cardiac Magnetic Resonance Imaging
Nickolas Forsch, BS (UC San Diego)

P090  Tissue tracking versus feature tracking for strain measurement on cardiac magnetic resonance
Jimmy Lu, MD (University of Michigan)

P091  Effect of General Anesthesia on Cardiac Magnetic Resonance Derived Cardiac Function in Tetralogy of Fallot.
Steve Muyskens, MD , FACC (Cook Children’s Medical Center)

P092  Quantitative Regional Fibrosis Burden in Duchenne Muscular Dystrophy Patients by Cardiac Magnetic Resonance Imaging
Ramkumar Krishnamurthy, PhD., D-ABMP-MRI (Nationwide Children’s Hospital)

P093  Flow asymmetry in the aortic root in TGA patients after arterial switch operation
Roel van der Palen, MD (Division of Pediatric Cardiology, Department of Pediatrics, Leiden University Medical Center, Leiden, The Netherlands)

P094  Impact of aortopulmonary collateral flow on single ventricle function and blood flow haemodynamics in patients after the Fontan procedure: a longitudinal CMR study
Heiner Latus, Dr.(German Heart Centre Munich)
FRIDAY 2 FEBRUARY

P095  Effects of food intake on Fontan hemodynamics assessed by a novel, dynamic CMR protocol
Jakob Hauser, MBBS (University College London)

P096  Anything but open-and-shut’: Patient-specific, 3D printed heart valves within models of congenital heart disease
Nick Byrne (Guy’s and St. Thomas’ NHS Foundation Trust, King’s College London School of Biomedical Engineering & Imaging Sciences)

P097  Relative pressure gradients across the right ventricular outflow tract measured by 4D flow CMR
Piet Werner (Technical University Munich)

P098  Comparison of Intra-Cardiac Magnetic Resonance Blood Oximetry to Invasive Catheterization in Pediatric Patients with Congenital Heart Disease
Juliet Varghese, PhD (The Ohio State University)

P099  Fetal Cardiac Cine MRI Using Doppler Ultrasound Gating
Fabian Kording (Department of Diagnostic and Interventional Radiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, Germany)

P100  Functional impact of CMR measures of diffuse myocardial fibrosis in patients with Duchenne muscular dystrophy
Joseph Pagano, MD (The Hospital for Sick Children)

P101  Right Ventricular Remodelling following Pulmonary Valve Replacement in Patients with Tetralogy of Fallot
Victoria Stoll, DPhil, BMBCh (University of Birmingham)

P102  Cardiac Magnetic Resonance T2 Mapping in the Surveillance of Acute Allograft Rejection in Pediatric Cardiac Transplant Patients
Neeta Sethi, MD (Children’s National Health System)

P103  Native T1 Values Can Identify Pediatric Patients with Myocarditis
Rohan Kumthekar, M.D. (Children’s National Health System)

P104  Native T1 measurements in pediatric heart transplant patients correlate with history of prior rejection episodes
Ashish Doshi, MD, PhD (Children’s National Medical Center)

P105  Comparison between 4D and 2D CMR flow in quantitative assessment of pulmonary blood flow in surgically repaired tetralogy of Fallot patients
Mahmoud Shaaban, MBCh, MSc. (Aswan Heart Center (Magdi Yacoub Foundation) - Cardiology department, Tanta University)

P106  Papillary muscle mass quantification using cardiovascular magnetic resonance for the diagnosis of pediatric left ventricular non-compaction
Jason Johnson, MD MHS (LeBonheur Children’s Hospital, University of Tennessee)

P107  Parameters of biventricular deformation in patients with repaired and unrepaired Ebstein’s anomaly – assessment by tissue tracking cardiovascular magnetic resonance
Simona Marcara (Azienda Ospedaliera Papa Giovanni XXIII, Bergamo)
P108 Native T1 measurements from CMR identify severity of myocardial disease over time in patients with Duchenne muscular dystrophy on therapy
Laura Olivieri, M.D.(Children’s National Medical Center)

P109 Impact of gender and age on CMR parameters in repaired tetralogy of Fallot: insights from a large, prospective, international study of children and adults with chronic pulmonary regurgitation. From the CORRELATE study investigators
Benedetta Leonardi, MD (Ospedale Pediatrico Bambino Gesu, Rome)

P110 Evaluation of Myocardial T1 Mapping and Extracellular Volume (ECV) After Pediatric Heart Transplantation
Margaret Samyn, MD (Medical College of Wisconsin/ Children’s Hospital of Wisconsin)

P111 Ventricular volume assessment in Adult Congenital Heart Disease using single breath-hold Compressed-Sensing Cardiac Cine MR
Srinivas Ananth Narayan, MRCPCH, MD (Kings College London)

P112 Diffuse and focal myocardial fibrosis late after Norwood procedure
Naira Mkrtchyan, Dr. Med. (Pediatric Cardiology and Congenital Heart Disease, German Heart Center Munich)

P113 The value of shunt size and ventricular volumes at rest and during dobutamine stress in predicting the effect of transcutaneous closure of atrial septal defect
Sigurdur Stephensen (Clinical Physiology, Lund University, Lund, Sweden.)

P114 Focal Scar and Diffuse Myocardial Fibrosis on CMR in Patients with History of Repaired Tetralogy of Fallot
Hubert Cochet (IHU LIRYC - CHU / Université de Bordeaux)

P115 Combined T1 mapping and stress perfusion CMR: A promising non-contrast assessment of myocardial perfusion in children.
Lazaro Hernandez, MD (Joe DiMaggio Children’s Hospital)

P116 Patients with repaired Tetralogy of Fallot and pulmonary regurgitation have higher hemodynamic forces in the right ventricle compared to controls
Pia Sjöberg, M.D. (Lund University, Skane University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

P117 Left atrial strain assessment in children with repaired tetralogy of Fallot
Richard Friesen, MD (Seattle Children’s Hospital)

P118 Pediatric cancer survivors have no MRI evidence of diffuse myocardial fibrosis and demonstrate preserved systolic and diastolic function
Wadi Mawad, MD (The Hospital for Sick Children)

P119 Parameters of biventricular dyssynchrony in patients with repaired and unrepaired Ebstein’s anomaly – assessment by tissue tracking cardiovascular magnetic resonance
Simona Marcora (Azienda Ospedaliera Papa Giovanni XXIII , Bergamo)
FRIDAY 2 FEBRUARY

P120 Intraventricular Vorticity increases during Stress in Fontan patients: Volumetric Analysis by 4D Flow CMR
Vivian Kamphuis, MD (Leiden University Medical Center, Netherlands Heart Institute)

P121 Right Ventricular Myocardium T1 and T2 Mapping in Patients with Repaired Tetralogy of Fallot
Matheus Godoi, MD (Hospital do Coração - Heart Hospital - HCOR, São Paulo, Brazil)

P122 Congenital Aortic Arch Repair in Bicuspid Aortic Valve Results in Altered 4D Flow Characteristics
Lajja Desai, M.D. (Northwestern University School of Medicine, Ann and Robert H. Lurie Children’s Hospital of Chicago)

P123 Evaluation of aortic stiffness for repaired coarctation of aorta by pulse-wave velocity with MRI
Qiong Yao (Children’s Hospital of Fudan University, China)

P124 T1 mapping for non-invasive quantification of diffuse myocardial fibrosis in children and adolescents with primary inherited cardiomyopathy
Nadya Al-Wakeel - Marquard, M.D. (German Heart Center Berlin)

P125 Imaging 4D tricuspid annulus morphology and motion in congenital heart diseases using long-axis CMR imaging
Liang Zhong, PhD (National Heart Centre Singapore; Duke-NUS Medical School)

P126 T1 mapping for cardiac iron in children
Amna Abdel-Gadir, MBBS.MRCP (UK)(University College London and Barts Heart Centre)

P127 Intraventricular kinetic energy increase exceeds rise in viscous energy loss during stress in Fontan patients: a 4D Flow CMR study
Vivian Kamphuis, MD (Leiden University Medical Center, Netherlands Heart Institute)

P128 Remodelling of right ventricular compartments after pulmonary valve replacement or reconstruction in patients with repaired tetralogy of Fallot
Eva Kis, MD (Department of Pediatric Cardiology, UKSH, Christian-Albrechts University Kiel, Germany and Gottsegen György Hungarian Institute of Cardiology, Pediatric Heart Centre, Budapest, Hungary)

P129 Abnormal blood flow dynamics are associated with anatomical torsion of the aortic arch and eccentric geometry of the RV in Patients with Hypoplastic Left Heart Syndrome after three-stage palliation
Dominik Gabbert, PhD (Department of Congenital Heart Disease and Paediatric Cardiology, University Hospital Schleswig-Holstein UKSH)

P130 Visualization of 4D MRI vascular flow patterns in pediatric pulmonary arterial hypertension
Anar Shah, DO (Children’s Hospital Colorado)

P131 Utility of three-dimensional whole heart imaging (3D-WHI) in the detection of acute myocarditis in paediatric patients
Davide Curione, MD (Bambino Gesù Children’s Hospital and Research Institute, Rome, Italy)

P132 Myocardial Characterization and Strain as a Diagnostic Tool in Pediatric Patients Receiving Anthracycline Chemotherapy
Cory Noel, M.D. (Texas Children’s Hospital - Baylor College of Medicine)
P133  T1/T2 mapping for diagnosis of myocarditis in pediatric patients
Matthew Cornicelli, MD (Ann & Robert H. Lurie Children’s Hospital of Chicago)

P134  Characterization of Cardiac Function and Rotational Mechanics in Boys with Duchenne’s Muscular Dystrophy
Patrick Magrath, MS (University of California, Los Angeles)

P135  MRI findings in patients underwent different types of Total Cavo Pulmonary Connection.
Paolo Ciliberti, MD (Bambino Gesù Children’s Hospital and Research Institute, Rome, Italy)

P136  Accuracy in Evaluating Cardiac Geometry, Function and Ventricular Strain in Children with Chronic Heart Failure from the MD-Pedigree study: Echocardiography versus Cardiac MRI
Aurelio Secinaro, MD (Bambino Gesù Children’s Hospital and Research Institute, Rome, Italy)

P137  Utilization of compressed sensing image acceleration in pediatric cardiac magnetic resonance imaging
Timothy Slesnick (Emory University School of Medicine, Children’s Healthcare of Atlanta)

P138  Comprehensive structure and function assessment by CMR in pediatric heart transplant patients.
Nazia Husain, MBBS, MPH (Ann & Robert H. Lurie Children’s Hospital of Chicago)

P139  Management of unbalanced pulmonary blood flow in univentricular patients: surgical intervention by intra-pulmonary septation and evaluation by CMR and catheterization
Keisuke Sato, MD (Shizuoka Children’s Hospital, Department of Cardiology)

P140  Regional Changes in Myocardial Strain During 6-month Exposure to Cardiotoxic Chemotherapy: Is there a Phenotype for Cardiotoxicity?
Reis Hansen (Stephenson Cardiac Imaging Centre, Libin Cardiovascular Institute of Alberta, University of Calgary)

P141  Assessment of Pulmonary Artery Mean Pressure with MRI and 4D flow vortex assessment.
Lindsey Crowe (Geneva University Hospitals)

P142  The CMR Impact on Pacemaker/ICD Parameters; an in vivo Reproducibility Study Pre and Post MRI; Cause for Alarm?
Robert Biederman, MD, FACC, FAHA (Allegheny General Hospital)

P143  Effects of Blood Pressure on Aortic Morphology and Stiffness in the Adult Population
Kwan Woo Paik (Duke NUS Medical School)

P144  Longitudinal, lateral and septal contribution to ventricular stroke volume remains unchanged after long-duration spaceflight
Katarina Steding-Ehrenborg, RPT, PhD (Lund University, Skåne University Hospital, Department of Clinical Sciences Lund, Clinical Physiology, Lund, Sweden)

P145  Tracking Electromechanical Activity in Ultra-thin Layers of Cardiac Tissue on 3T MRI Scanners
Vladimir Shusterman, MD, PhD (PinMed, Inc.)
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P146  CMR-derived Strain in Adult Cancer Survivors with a Normal Left Ventricular Ejection Fraction: an Age and Sex Matched Case Control Study
Iwan Harries, MBBCh BSc (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

P147  Novel Real-time Feedback Slice Tracking with a Predictive Algorithm and Spatially Resolved MR-compatible Ultrasound for Cardio-vascular MRI.
Lindsey Crowe (Geneva University Hospitals)

P148  What have we Learned from Echo-TAVR; Can we apply it to CMR-TAVR?
Victor Farah, MD (Allegheny General Hospital)

P149  The heart in Wilson’s disease. A 3-Tesla cardiac magnetic resonance imaging study.
Silvio Quick, MD (Heart Center Dresden, Technische Universität Dresden)

P150  Myocardial remodeling and tissue characterization by CMR in endurance athletes
Soraya Merchan (Cardiac Imaging Unit, Cardiology Department, Salamanca University Hospital)

P151  Late characterisation of cardiac effects following Anthracycline and Trastuzumab treatment in breast cancer patients
Joseph Selvanayagam, FRACP, DPhil (Flinders University, Adelaide, SA, Australia)

P152  Right Ventricular Function after Anthracycline Therapy
Thiago de Souza, MD, Msc (UNICAMP)

P153  Age and Sex Dependent Effects of Trabeculae and Papillary Muscle Inclusion on Left Ventricular Volumetry by Cardiac Magnetic Resonance
Vincent Chen (Northwestern University Feinberg School of Medicine)

P154  Added value of right ventricular 3-chamber view in patients with pulmonary hypertension using a comprehensive right ventricular myocardial systolic strain analysis with Feature-Tracking cardiac magnetic resonance.
Theresia Akhlaghi, B.Sc. (Lund University, Dept of Clinical Sciences, Clinical Physiology, Lund, and Skane University Hospital, Lund)

P155  Towards improving applicability of respiratory self-gating (RSG): a multi-band approach
Chenxi Hu, PhD (Yale University)

P156  Incremental value of cardiac deformation analysis in patients with troponin-positive chest pain and unobstructed coronary arteries: a cardiovascular magnetic resonance imaging study
Rocio Hinojar, MD (Ramon Y Cajal University Hospital)

P157  Thalassemia Intermedia: a truly cardiac iron-overload free disease?
Camilla Torlasco, MD (University of Milan-Bicocca. IRCCS Istituto Auxologico Italiano, Milan, Italy)

P158  Blunted myocardial oxygenation response in Heart Failure with Preserved Ejection Fraction (HfPEF)
Kady Fischer, PhD (McGill University Health Center, University Hospital Bern)

P159  Focal myocardial fibrosis in high endurance exercise ahtletes
Blanca Domenech, MD (Hospital Josep Trueta)
FRIDAY 2 FEBRUARY

P160 Artefacts in 1.5 Tesla and 3 Tesla cardiac magnetic resonance imaging in patients with leadless cardiac pacemakers
Daniel Kiblboeck (Kepler University Hospital Linz, Austria)

P161 Left ventricular function and left atrial size: insights from parametric CMR
Robert Adam, MBBS, BSc (Hons) (University Hospital Southampton)

P162 Unexpected extracardiac and non-ischaemic cardiac findings in a large cohort of patients undergoing stress perfusion cardiac magnetic resonance.
Chrysanthos Grigoratos, MD (Fondazione Toscana Gabriele Monasterio, Pisa (Italy))

P163 Prevalence of aneurysm of the ascending aorta in hypertensive patients
Jordan Long (Sharon Regional Health System)

P164 Simulating diffusion tensor cardiovascular magnetic resonance using a histology-based virtual microstructure
Jan Rose, MSc (Imperial College London)

P165 Impact of CMR in the diagnosis of acute coronary syndrome with unobstructed coronary arteries
Nadine Abanador-Kamper (Department of Cardiology, HELIOS Medical Center Wuppertal, University Hospital Witten/Herdecke, Wuppertal, Germany; Center for Clinical Medicine Witten/Herdecke University Faculty of Health, Wuppertal, Germany)

P166 The Costly Paradox of CMR. Is it a disruptive Health-Care Technology?
Nelu-Mihai Trofenciuc (Victor Babes University of Medicine and Pharmacy Timisoara)

P167 Effect of obesity on native T1 values assessed by T1 mapping in hypertrophic cardiomyopathy
Jie Wang, BMSci (Department of Cardiology, West China Hospital, Sichuan University)

P168 Comparison of the tissue characteristics between MYH7 and MYBPC3-caused hypertrophic cardiomyopathy with CMR in Chinese people
Jie Wang, BMSci (Department of Cardiology, West China Hospital, Sichuan University)

P169 Prevalence and clinical relevance of extra-cardiac findings in CMR imaging
Cesare Mantini (Department of Neuroscience, Imaging and Clinical Sciences, “G. D’ Annunzio” University, Chieti, Italy)

P170 Measuring the effects of strain on the diffusion tensor in myocardial tissue: Design and initial testing of a phantom
Andrew Scott, PhD (Royal Brompton Hospital)

P171 The prevalence of myocarditis in Dengue patients: Non-invasive detection of cardiac involvement and evaluation of cardiac function using contrast-enhanced MRI
Mohamad Nazrulhisham Mad Naser, MBBS (UM), MIntMed (UM)(Department of Cardiology, Hospital Pulau Pinang, Malaysia)

P172 The Importance of extra Cardiac anatomy when reporting
Luke Dancy, MBBS, MRCP (Kings College Hospital)
P173 Myocardial strain assessed by CRM tissue-tracking in the differential diagnosis of left ventricular hypertrophy. Ilaria Dentamaro, MD (Hospital Vall d’Hebron Barcelona)

P174 Does Native Myocardial T1 Relaxation Time and Extracellular Volume Fraction Improve After Autologous Stem Cell Transplantation in Cardiac Amyloidosis: A Case Series. Luis Enriquez Rodriguez, MD (Hospital Clinico San Carlos)

P175 The influence of abnormal left atrial area on pulmonary haemodynamic assessment by septal curvature: an analysis of 114 patients with same day right heart catheter and CMR studies. Hossam Fayed, MBChB MSc MRCP(UK) (UCL Department of Cardiac MRI, Royal Free Pulmonary Hypertension Service)

P176 Association of Left Ventricular Remodeling and Systolic Function with Native T1 Mapping. Connie Tsao, MD, MPH (Beth Israel Deaconess Medical Center)

P177 Characterizing Left Ventricular Displacements During Active Diastolic Filling with CINE DENSE. Patrick Magrath, MS (University of California, Los Angeles)

QF2-01 Automatic Ejection Fraction in Three Minutes. Okai Addy (HeartVista, Inc)

QF2-02 Quantitative cardiac gene transfer imaging with CEST-MRI and a genetically encoded reporter gene. Moriel Vandsburger (University of California, Berkeley)

QF2-03 Myocardial Blood Flow falls during stress in Hypertrophic Cardiomyopathy. A Perfusion mapping study. Claudia Camaioni (Barts Heart Center)

QF2-04 MR Augmented Right Heart Catheterization in children with pulmonary arterial hypertension: Prognostic Significance. Bejal Pandya (Barts Heart Centre)

QF2-05 RF Ablation of the Left Atrium and Pulmonary Vein Ostia is well Visualized by Non-contrast-enhanced MRI in a Swine Model. Michael Guttmann (The Johns Hopkins University, School of Medicine)

QF2-06 Non-Contrast Stress T1 Mapping CMR to Detect Mocardial Ischemia - Initial Experience. Sebastian Bohnen (University Heart Center Hamburg)

QF2-07 Selective apheresis of C-reactive protein reduces myocardial reperfusion injury in patients with ST-segment elevation myocardial infarction. Tomas Lapinskas (Medical Academy, Lithuanian University of Health Sciences)

QF2-08 Automatic Optimal Frequency Adjustment for High Field Cardiac MR Imaging via Deep Learning. James Goldfarb (St Francis Hospital)

QF2-09 LA strain as an early imaging biomarker of Cardiotoxity: Cardiotox – CMR sub-study. Anna Reid (University Hospital of South Manchester)
FRIDAY 2 FEBRUARY

QF2-10 Comparison of Cardiac Magnetic Resonance-Derived Blood Oximetry to Invasive Catheterization in Heart Transplant Recipients
Juliet Varghese (The Ohio State University)

QF2-11 Novel insights into disease mechanism from in-vivo assessment of creatine kinase kinetics in hypertrophic cardiomyopathy.
Betty Raman (University of Oxford, Division of Cardiovascular Medicine)

QF2-12 Myocardial scar imaging using contrast steady state in a chronic porcine infarct model
John Whitaker (King’s College London/Beth Israel Deaconess Medical Centre)
SATURDAY 3 FEBRUARY

10:15 - 11:00
Poster Session 3

EXHIBITION HALL

P178 Absence of T1 hyperintensity in the brain of high-risk iron loaded thalassemia patients after multiple high doses of Gadobutrol for cardiac LGE
Alessia Pepe, MD, PhD (Fondazione G. Monasterio CNR Regione Toscana)

P179 New occurrences of macroscopic myocardial fibrosis in thalassemia at long term by multiple follow-up
Alessia Pepe, MD, PhD (Fondazione G. Monasterio CNR Regione Toscana)

P180 Quantifying Inflammation in Atherosclerotic Plaque: a Fluorine-19 MRI Mouse Study at 3T
Roberto Colotti (Lausanne University Hospital (CHUV))

P181 Manganese-enhanced T1 mapping in myocardial infarction: validation with 18F-FDG PET/MR
Nick Spath, BSc MD (University of Edinburgh)

P182 Differences in intracellular lifetime of water between patients with and without concentric and eccentric left ventricular hypertrophy cannot be detected in a clinical setting at 1.5T
Magnus Lundin, MD (Karolinska institutet, CMR group)

P183 Acute adverse events in cardiac MR imaging with Gadolinium based contrast agents: results from the European Society of Cardiovascular Radiology (ESCR) MRCT registry in 72,839 patients.
Johannes Uhlig, MD MPH (University Medical Center Göttingen, Institute for Diagnostic and Interventional Radiology)

P184 Myocardial Contraction Fraction: Distribution, Determinants and Normal Reference Values in Adults
Michael Chuang, MD, ScM (Beth Israel Deaconess Medical Center)

P185 Anisocytosis and its association with LV structure and function in the UK Biobank cohort
Marinos Koulouroudias, MBBS, BMedSci (William Harvey Research Institute, NIHR Cardiovascular Biomedical Research Unit at Barts, Queen Mary University of London, Charterhouse Square, London, EC1M 6BQ, UK)

P186 Prevalence and clinical relevance of incidental extra-cardiac findings in the Hamburg City Health Study - a prospective single-center population study of German middle-aged and old population compared with published pooled data
Maxim Avanesov, MD (UKE)

P187 Reference values for myocardial T1, T2 and Extracellular Volume Fraction at 3.0 Tesla in the Hamburg City Health Population Study
Jan Schneider, MD (University Heart Center)

P188 Cross-Vendor Validation of Synthetic ECV Calculation at 1.5 Tesla
Graham Fent, MBChB, BSc (University of Leeds)

P189 Diagnostic performance of cardiac magnetic resonance T1 and T2 mapping in patients with biopsy-proven DCM-like acute myocarditis
Bettina Baeßler, M.D. (University Hospital of Cologne, Department of Radiology)
SATURDAY 3 FEBRUARY

P190  Comparison of image quality with and without the use of an abdominal restrictive band in non-contrast enhanced, navigator 3D thoracic MRA
Richard Coulden, MB BS (University of Alberta Hospital)

P191  Automated detection of clinical and genetic effects on three-dimensional cardiac phenotypes using MR imaging and computational modelling.
Carlo Biffi, MSc (Imperial College London)

P192  Myocardial Scar Sub-Component Visualization using Multi-Parametric Cardiac Maps from a Single Scan
Zahra Hosseini (Imaging Research Laboratories, Robarts Research Institute)

P193  Pre and post-contrast dark-blood SASHA T1 mapping - an initial feasibility study
Gabriella Captur, MD PhD MRCP MSc (Barts Heart Centre)

P194  Normal Pediatric and Adult Regional Biventricular Myocardial Motion by Tissue Phase Mapping
Alexander Ruh, PhD (Northwestern University)

P195  Clinical value of dark blood late gadolinium enhancement without additional magnetisation preparation
Caroline Van De Heyning, MD PhD (St. Thomas’ Hospital, London; King’s College London; Antwerp University Hospital)

P196  Feasibility of Fetal cine CMR based on Doppler Ultrasound Triggering and Compressed Sensing
Anthony Aletras, PhD. (Aristotle University of Thessaloniki/Lund University)

P197  4D flow MRI for the analysis of celiac trunk and mesenteric artery stenoses
Florian Siedek, MD (University Hospital Cologne)

P198  High resolution in-vivo diffusion tensor cardiovascular magnetic resonance using a variable density interleaved spiral trajectory
Margarita Gorodezky, M. Sc. (Cardiovascular Magnetic Resonance Unit, Royal Brompton Hospital)

P199  Influence of different post-processing tools on myocardial T1 and T2 relaxation times generated by cardiac T1 and T2 mapping
David Zopfs, M.D. (University Hospital Cologne, Department of Diagnostic and Interventional Radiology)

P200  Non-ECG, free-breathing myocardial T1-T2 mapping using CMR multitasking: Application to acute myocardial infarction
Anthony Christodoulou, PhD (Cedars-Sinai Medical Center)

P201  Clinical Utility and Feasibility of Cardiac Magnetic Resonance Wideband Protocol in Patients with ICD and Ventricular Tachycardia
Amit Patel, MD (University of Chicago)

P202  Improved segmental myocardial strain reproducibility using deformable registration algorithms in comparison with feature tracking CMR and speckle tracking echocardiography
Jie Wang, BMSci (Department of Cardiology, West China Hospital, Sichuan University)
SATURDAY 3 FEBRUARY

P203  Septal curvature during exercise in pulmonary hypertension- a pilot CMR study
Raj Puranik, PhD FRACP (Royal Prince Alfred Hospital, University of Sydney)

P204  Accelerating mutli-slice reduced field of view cardiac T2-ADC mapping with a restore pulse
Kévin Moulin (Department of Radiological Sciences, University of California, Los Angeles, CA)

P205  Feasibility and Reproducibility of Automated Mapping of Left Ventricular Kinetic Energy using Four-dimensional Flow Imaging in post MI patients and healthy volunteers.
Pankaj Garg, MD, PhD (University of Leeds, UK)

P206  Repeatability of myocardial T1 and T2 mapping using MR Fingerprinting and comparison to clinical standards
Shivani Pahwa, MD (University Hospitals Cleveland Medical Center/CWRU)

P207  Early and late peak mitral inflow kinetic energy mapping of the left ventricle is associated with age in the healthy population
Saul Crandon, M.Res. (University of Leeds)

P208  Clinical feasibility of 4D phase-contrast flow CMR imaging in hemodynamic assessment of congenital heart disease patients: A comparison with 2D flow
Liang Zhong, PhD (National Heart Centre Singapore; Duke-NUS Medical School)

P209  Minimising noise floor effects in spiral diffusion tensor cardiovascular magnetic resonance
Margarita Gorodezky, M. Sc. (Cardiovascular Magnetic Resonance Unit, Royal Brompton Hospital)

P210  Contributions of Afterload and Contractility to Adverse Effects of Chemotherapy on Myocardial Function
Nathaniel Reichek, MD FACC (St. Francis Hospital-The Heart Center and Stony Brook University)

P211  Quantitative assessment of left ventricular volumes and function using real-time strain-encoded CMR imaging: method agreement analysis
Tomas Lapinskas, MD (Medical Academy, Lithuanian University of Health Sciences)

P212  T1-Mapping in healthy volunteers – Influence of age and contrast media
Edyta Blaszczyk, MD (Working Group on Cardiovascular Magnetic Resonance, Experimental and Clinical Research Center a joint cooperation between the Charité Medical Faculty and the Max-Delbrueck Center for Molecular Medicine HELIOS Klinikum Berlin Buch, Germany)

P213  Distribution of left ventricular trabeculation across gender and age in a cohort of 140 healthy Caucasian subjects
Zakarya Bentatou, MS (Aix-Marseille Univ, CNRS, CRMBM, Marseille, France)

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Gabriella Vincenti,1) Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland.(1) Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland)

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Zihao Zhang, PhD. (State Key Laboratory of Brain and Cognitive Science, Beijing MR Center for Brain Research, Institute of Biophysics, Chinese Academy of Sciences)

P364 Quantitative Multi-Contrast CMR of Carotid Atherosclerosis: Pushing for Higher Clinical Value
Yibin Xie, PhD (Cedars-Sinai Medical Center)

P365 Assessment of congenital vascular anomalies in people affected by Thalidomide
Julius Weinrich, M.D (University Medical Center Hamburg-Eppendorf)

P366 Automatic Image-Based Background Phase Correction in the Presence of Wrap-Around Artifact
Aaron Pruitt, B.S. (The Ohio State University)

P367 Arterial geometry, flow and stiffness indices from thoracic aorta and carotid MRI in elderly hypertensives
Etienne Charpentier (Sorbonne Universités, UPMC Univ Paris 06, INSERM UMRS 1146, CNRS UMR 7371, Laboratoire d’Imagerie Biomédicale)
P368  Ferumoxytol-Enhanced MR Venography in End-Stage Renal Disease
Puja Shahrouki, M.D. (Department of Radiology, David Geffen School of Medicine at UCLA)

P369  Supine, prone, right and left postures - gravitational effects on human pulmonary vascular physiology studied with MRI
Björn Wieslander, MD PhD (Department of Clinical Physiology, Karolinska Institutet and Karolinska University Hospital, Stockholm, Sweden)

P370  Is there a need for a different clinical management of the bicuspid aortic valve aortopathy? A 4D flow-derived regional biomechanics comparison with tricuspid aortic valve and Marfan subjects
Andrea Guala (Hospital Universitari Vall d’Hebron. Vall d’Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

P371  Impact of age and dilation on ascending aorta longitudinal and circumferential strain in bicuspid aortic valve patients
Andrea Guala (Hospital Universitari Vall d’Hebron. Vall d’Hebron Institut de Recerca. Universitat Autònoma de Barcelona)

P372  Feasibility of Interventional Procedure Planning using Quiescent-Interval Single-Shot (QISS) MRA in Patients with Peripheral Artery Disease
Taylor Duguay, BS (Medical University of South Carolina)

P373  Improved aortic distensibility after renal sympathetic de-nervation in patients with resistant hypertension. A multi-center CMR study.
Lukas Stoiber, MD (German Heart Center Berlin)

P374  3D dark-blood interleaved with gray-blood (DIG) vessel wall imaging of the aortic arch
Zhaoyang Fan, PhD (Cedars-Sinai Medical Center)

P375  Stress cardiovascular magnetic resonance for evaluation of antineoplastic associated cardiotoxicity in a real-world cohort of breast cancer patients
Vinh Nguyen, MD (Yale School of Medicine)

P376  Cardiac output assessment during and after pregnancy in women with heart disease as compared with normal controls using cardiovascular magnetic resonance imaging (MoMs Heart Study)
Robin Ducas, BSc, MD (University of Toronto)

P377  Is 2-D Echocardiography Adequate for Detection of Pericardial Effusion in Women?
Selena Chandler (Sharon Regional Health System)

P378  Small pericardial and pleural effusions – always a sign for inflammation? A CMR study in healthy females.
Agnieszka Töpper, MD (Working Group on Cardiovascular Magnetic Resonance, Experimental and Clinical Research Center a joint cooperation between the Charité Medical Faculty and the Max-Delbrueck Center for Molecular Medicine HELIOS Klinikum Berlin Buch, Department of Cardiology)

QF3-01 Clinical feasibility of 2-minute aortic 4D flow MRI: initial experience at two centers
Emilie Bollache (Northwestern University)
SATURDAY 3 FEBRUARY

QF3-02 T1 mapping for the prediction of treatment response in AL amyloidosis
Rosario Perea Palazón (Hospital Clinic. Universitat de Barcelona)

QF3-03 Prognostic Utility of Blood Oxygen Level Dependent (BOLD) Cardiovascular Magnetic Resonance (CMR) imaging in Asymptomatic Chronic Kidney Disease (CKD) Patients with and without Diabetes Mellitus.
Ranjit Shah (South Australian Health and Medical Research Institute, Adelaide, SA, Australia)

Li-Yueh Hsu (National Heart, Lung and Blood Institute, National Institutes of Health)

QF3-05 Phenotype development in Cardiac Fabry disease proceeds through four stages: a prospective 182-patient study
Sabrina Nordin (Barts Heart Centre)

QF3-06 When criteria for ICD implantation in the primary prevention of sudden death among patients with hypertrophic cardiomyopathy don’t get along: an analysis of late gadolinium-enhancement and the European and American guidelines
Pedro Freitas (Hospital de Santa Cruz)

QF3-07 Obesity paradox and myocardial injury by cardiac magnetic resonance imaging in ST-elevation myocardial infarction
Georg Fuernau (University Heart Center Lübeck)

QF3-08 Importance of operator training and rest perfusion on the diagnostic accuracy of stress perfusion CMR
Adriana Villa (King’s College London)

QF3-09 Diffuse interstitial fibrosis is associated with reduced myocardial strain in heart failure with preserved and reduced ejection fraction
Xiaodan Zhao (National Heart Centre Singapore)

QF3-10 Clinical Impact of Magnetic Resonance Imaging in Non-Approved Cardiac Devices
Ibrahim Saeed (Saint Luke’s Mid-America Heart Institute)

QF3-11 The Short-Term Prognosis Values of combined T1 Mapping and Feature Tracking by Cardiovascular Magnetic Resonance in Dilated Cardiomyopathy
Hui Liu (Guangdong General Hospital, Guangdong Academy of Medical Sciences)

QF3-12 Impact of aortic geometrical characteristics on abnormal flow pattern in the proximal descending aorta in Marfan patients: a 4D flow MRI study
Andrea Guala (Hospital Universitari Vall d’Hebron. Vall d’Hebron Institut de Recerca. Universitat Autònoma de Barcelona)
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- Friday 2 February  08.00 - 20.30
- Saturday 3 February  08.00 - 19.30

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European Society of Cardiology  
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Heartvista develops autonomous MRI systems using machine learning techniques. Heartvista’s first self-driving clinical MRI product, SmartHeart App, assists a rapid complete cardiac MR examination with a single button click.

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Booth 20

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INDUSTRY SESSIONS

Thursday 1 February

Product Theatre

15.00-15.45 Siemens Product Theatre

**Continuously pioneering cardiovascular MRI**
Christian Schuster (Siemens Healthineers)

**Free breathing cardiac MRI: First clinical results with MAGNETOM Vida**
Wolfgang Wüst (Universitätsklinikum Erlangen)

Friday 2 February

Product Theatre

10.15-11.00 GE Healthcare Product Theatre

**Streamlined Clinical CMR Exams with ViosWorks powered by Deep Learning**

10:20 - 10:30 Martin Janich (GE Healthcare)
10:30 - 10:40 John Axerio-Cilies (Arterys)
10:40 - 10:50 Vicente Martínez de Vega Fernández (Quirónsalud Madrid University Hospital)

Saturday 3 February

Product Theatre

10.15-11.00 Arterys Product Theatre

**Clinical experience with Deep Learning automation and validation of 4D flow MRI compared to Echo**

10:20 – 10:30 John Axerio-Cilies
10:30 – 11:00 Jean-François Paul
INDUSTRY SESSIONS

Thursday 1 February

Lecture Room
12:30 - 13:30 Satellite Symposium organised by Bayer AG

Spotlight on aspects of Gd presence and optimized management of CAD patients with CMR

Chairs: Eike Nagel, MD, PhD (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)

12:35 - 13:00 Presence of Gadolinium in the brain and body - What matters and what do we need to know?
Val Runge, MD (University Institute of Diagnostic, Interventional and Pediatric Radiology)

13:00 - 13:25 Stress perfusion imaging to guide the management of patients with stable coronary artery disease
Eike Nagel, MD, PhD (University Hospital Frankfurt; Institute for Experimental and Translational Cardiovascular Imaging; DZHK Centre for Cardiovascular Imaging)

Friday 2 February

Plenary Room
18:05 – 19:00 Software Face-off

Chairs: Gianluca Pontone, (Centro Cardiologico Monzino, IRCCs)
Christopher Miller, MBChB PhD (University Hospital of Manchester)

Arterys
Albert Hsiao (La Jolla, USA)
Medis Medical Imaging Systems
David Hautemann (Leiden, NL)
Medviso AB
Einar Heiberg (Lund, SE)
Neosoft, LLC
Steven Wolff (New York, USA)
TeraRecon
Alberto Clemente (Masa, IT)
INDUSTRY SESSIONS

Lecture Room
12:30 - 13:30 Satellite Symposium organised by Circle CVI

The CMR Technology of the Future is Here

**Chairs:**
Matthias Friedrich, MD (McGill University Health Centre)
Chiara Bucciarelli-Ducci, MD, PhD (Bristol Heart Institute, Bristol NIHR Biomedical Research Centre (Cardiovascular Section), University of Bristol)

**Machine Learning and Big Imaging Data**
Steffen Petersen, MD DPhil MPH FRCP (Queen Mary University of London)

**Imaging Myocardial Fibers**
Dudley Pennell, MD (Royal Brompton Hospital)

**Improved Time Efficiency in CMR Imaging**
Matthias Stuber, PhD (University of Lausanne)

**3D multi-parametric MRI: get all in one**
Rene Botnar, PhD (King's College London)

**Remote and Automated Scanning**
Bob Hu, MD (HeartVista)

**Cardiothoracic 4D Flow MRI**
Michael Markl, PhD (Northwestern University)

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Hands on Room
08:00 - 10:15 Level 2/3 case sessions

**Perfusion - Session 1**

**Chairs:**
Robin Nijveldt, MD, PhD (Radboudumc)
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)
John Paul Carpenter, MD(Res) FRCP (Poole Hospital NHS Foundation Trust)

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Hands on Room
13:30 - 15:45 Level 2/3 case sessions

**Perfusion - Session 2**

**Chairs:**
Robin Nijveldt, MD, PhD (Radboudumc)
Ana Almeida, MD, PhD (University Hospital Santa Maria, Lisbon, Portugal)
John Paul Carpenter, MD(Res) FRCP (Poole Hospital NHS Foundation Trust)

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Hands on Room
12:00 - 10:15 Level 2/3 case sessions

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Hands on Room
11:00 - 13:30 Level 2/3 case sessions

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INDUSTRY SESSIONS

Saturday 3 February

Lecture Room
12:30 - 13:30 Satellite Symposium organised by Guerbet

Updates on Gadolinium Based Contrast Agents Usage in CMR

Chairs: Michael Campbell, MD, MHA (Duke University)
Tim Leiner, MD, PhD (Utrecht University Medical Center)

12:30 - 12:42 Three decades of GBCA clinical experience
Tim Leiner, MD, PhD (Utrecht University Medical Center)

12:42 - 12:54 EMA Recommendations on GBCA Safety
Alexander Radbruch, MD, JD (German Cancer Research Center)

12:54 - 13:06 NIH Perspective on GBCA Safety
Ashkan Malayeri, MD (NIH)

13:06 - 13:18 Gadolinium-based contrast agents in pediatric MRI
Michael Campbell, MD, MHA (Duke University)

Hands on Room
08:00 - 10:15 Level 2/3 case sessions

Congenital - Session 1

Chairs: Oliver Tann, MRCP, FRCR (Great Ormond Street Hospital)
Emanuela Valsangiocomo Buechel (University Childre’s Hospital Zurich)
Tobias Rutz (Division of Cardiology and Center of Cardiac Magnetic Resonance, Cardiovascular Department, University Hospital of Lausanne, CHUV, Switzerland.)

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Hands on Room
11:00 - 13:30 Level 2/3 case sessions

Congenital - Session 2

Chairs: Oliver Tann, MRCP, FRCR (Great Ormond Street Hospital)

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Following adverse reactions have been observed: 1) Common (≥ 1/100 to < 1/10) headache, nausea, 2) Uncommon (≥ 1/1,000 to < 1/100) hypersensitivity/anaphylactoid reaction, dizziness, dyspnea, parasthesia, dysuria, vomiting, rhinitis, pruritus, rash, injection site reaction, feeling hot. 3) Rare (≥ 1/10,000 to < 1/1,000) loss of consciousness, convulsion, paraesthesia, tachycardia, palpitations, dry mouth, pruritus, feeling cold. 4) Not known: cardiac arrest. NSF: Patients with an allergic disposition suffer more frequently than others from hypersensitivity reactions. Isolated cases of NSF have been reported with Gadovist® 1.0. Pseudotumour population: Frequency, type and severity of adverse reactions in children of all ages (including term neonates) are consistent with the adverse drug reaction profile known in adults. Overdosage: The maximum daily dose test dosed in humans is 1.5 mmol gadobutrol/kg body weight. 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However, there is no evidence that haemodialysis is able to alter the clinical course of NSF. After 3 haemodialysis sessions approx. 98% of the agent are removed from the body. However, there is no evidence that haemodialysis is able to alter the clinical course of NSF. After 3 haemodialysis sessions approx. 98% of the agent are removed from the body. However, there is no evidence that haemodialysis is able to alter the clinical course of NSF. After 3 haemodialysis sessions approx. 98% of the agent are removed from the body. However, there is no evidence that haemodialysis is able to alter the clinical course of NSF. After 3 haemodialysis sessions approx. 98% of the agent are removed from the body. However, there is no evidence that haemodialysis is able to alter the clinical course of NSF. After 3 haemodialysis sessions approx. 98% of the agent are removed from the body. However, there is no evidence that haemodialysis is able to alter the clinical course of NSF. 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- Acquire free-breathing, high-resolution Cardiac Cine images.
- Capture the whole cardiac cycle for precise quantification.
- Expand patient population eligible for cardiac MRI.

1 Sudarski et. al., Radiology. 2016 Jul 11:151002

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MRI provides great diagnostic value. However, it is still considered too slow to visualize fast physiological processes in high quality.

With our disruptive speed technology – Compressed Sensing – overcome these challenges and go beyond speed by accelerating MRI acquisition at a factor of up to 10, with no loss in image quality.

Discover the 1st clinical application – Compressed Sensing Cardiac Cine:
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Speed done right, every time.

In a society where reimbursements are declining and chronic conditions lead to increased MR procedures and longer waiting times, there is ever increasing pressure on the radiology department. Today, further attempts to accelerate compromise image quality or are limited to a narrow range of scans. Therefore, to meet the increased demand for productivity, a technology break-through in acceleration is still required.

This is why Philips brings Compressed SENSE, a breakthrough in productivity. Compressed SENSE is not only about faster sequences, it is much more. It is about accelerating full patient examinations and thus guaranteeing the next level in productivity and image quality to empower your staff to focus where it matters the most, enhanced patient care.

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