

Heart Rhythm 2013

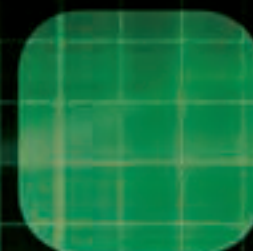
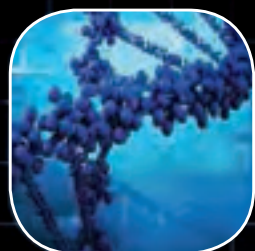
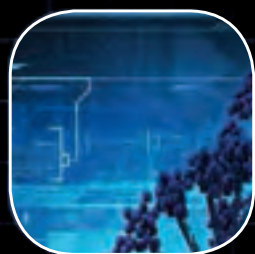
2013 FINAL PROGRAM

www.HRSonline.org/Sessions

34TH ANNUAL SCIENTIFIC SESSIONS | MAY 8–11, 2013 | DENVER, CO

Science | Discovery | Innovation

HONORING OUR PAST. SHAPING OUR FUTURE.



Extend Your Learning with Heart Rhythm On Demand

HIGHLIGHTS:

- Access more than 400 hours of presentations from the Heart Rhythm Society's 34th Annual Scientific Sessions
- Don't miss a session – you can view most presentations online just as if you were in the room
- Convenient online, mobile, and companion USB for on-the-go access
- Additional CE/CME credits over what you earned at the meeting
- NOW INCLUDED: Electronic Posters!
- **NEW THIS YEAR: Purchase AF or VT/VF Summit On Demand onsite and SAVE!**

**Save up to
\$200 onsite at:**

Grand Concourse &
Heart Rhythm Place,
Booth 739



Purchase today and save! | www.HeartRhythmOnDemand.org

Dear Heart Rhythm Professional,

On behalf of the Scientific Sessions Program Committee and its leadership, welcome to Denver and Heart Rhythm 2013! We are excited to offer you three and a half days of education and networking opportunities aimed at advancing your knowledge and improving patient care.

This year, we will be celebrating our Society's evolution, focusing on "Honoring Our Past. Shaping Our Future." Special presentations will highlight how the groundbreaking events of our rich past have led to the science and technology that continue to advance our dynamic field today.

Our 34th Annual Scientific Sessions will open with President Bill Clinton delivering the keynote address at the Opening Plenary Session. President Clinton's remarks will be followed by the Featured Poster Session and Reception in the Exhibit Hall.

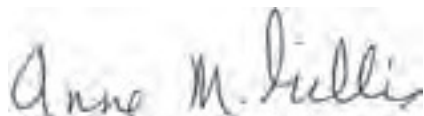
Over the following days, more than 900 of the world's most noted experts in cardiac rhythm management will present more than 250 educational sessions showcasing the latest science, discovery, and innovation. These sessions will represent all aspects of pacing, defibrillation, clinical arrhythmia management, ablation, pharmacology, genetics, basic science, and health policy.

While in Denver, make sure to experience this year's new additions to the program — Pioneers Unplugged, Battle of the Titans debate sessions, Rapid Fire Sessions, and the Lead Management Forum and VT/VF Summit. More than 130 exhibitors will be displaying and demonstrating the latest arrhythmia products and services in the Exhibit Hall, where a multitude of additional learning and networking opportunities will also be available.

Continuing our tradition of collaborating with our international colleagues, we will offer 18 joint sessions this year — a record number. These sessions not only enhance the clinical and scientific excellence of our meeting, but also reinforce our commitment to the global exchange of ideas and best practices to promote optimal patient care worldwide.

We hope you will take advantage of all of the education and networking opportunities that Heart Rhythm 2013 has to offer.

Welcome to Denver!



Anne M. Gillis, MD, FHRs
President, Heart Rhythm Society



Richard I. Fogel, MD, FHRs, CCDS
Chair, Scientific Sessions Program Committee

OVERVIEW

HEART RHYTHM SOCIETY SCIENTIFIC SESSIONS PROGRAM COMMITTEE



Richard I. Fogel, MD, FHRS,
CCDS - Program Chair



John D. Day, MD,
FHRS - Abstract Chair



Sana M. Al-Khatib, MD,
MHS, FHRS, CCDS



Christine M. Albert, MD



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Hugh Calkins, MD,
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Andrew D. Krahn, MD,
FHRS



Charles Kennergren, MD,
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HR 2013



Robin A. Leahy, RN, BSN,
FHRS, CCDS



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Laurie K. Racenet, ANP, CEPS,
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Jill L. Repoley, MSN, NP,
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Andrea M. Russo,
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Walid I. Saliba,
MD, FHRS



Elizabeth A. Stephenson,
MD, MSc, FHRS, CCDS



Charles D. Swerdlow, MD,
FHRS, CCDS



Craig A. Swygman, CVT,
FHRS, CEPS



John K. Tiedman, MD,
FHRS, CCDS

OVERVIEW

HOW TO USE THIS BOOK

At its busiest, Heart Rhythm 2013 will offer 22 concurrent sessions throughout the Colorado Convention Center (CCC). To assist you in navigating the meeting and finding the sessions that interests you, please refer to the following:

Each daily section of the Final Program Book (Wednesday through Saturday) lists the times, numbers, titles, and locations for each session, grouped by the following specialty tracks:

- Allied Professionals
- Basic/Translational Science
- Cardiovascular Implantable Electronic Devices & Heart Failure
- Clinical EP and Catheter Ablation
- Pediatric/Adult Congenital Heart Disease
- Policy, Payment & Practice
- Special Session

The sessions are also tagged for one or more of the following:

- Audience Response System (ARS)
- ARRT Credits
- CME/CE Credits
- Fellows-in-Training
- Practice Management
- Ticket Required

Please note the following:

- Heart Rhythm 2013 Official Educational Satellite Symposia are listed on page 29 and are not listed with Scientific Sessions. A full listing of the Official Educational Satellite Symposia can be found in the Official Educational Satellite Symposia Supplement.
- Attendees can navigate the meeting using various tools found on our website. Please visit www.HRSONline.org/Navigate-the-Meeting to access the following tools:
 - Online Itinerary Planner can be used to search for sessions and abstracts.
 - Wayfinder Online Planner or the Wayfinder Mobile App
 - Final Program ebook accessible in an electronic format

HR 2013

WELCOME LETTER	i
SCIENTIFIC SESSIONS PROGRAM COMMITTEE	ii–iii
HOW TO USE THIS BOOK	iv
HEART RHYTHM 2013 MEETING INFORMATION.....	2–10
HEART RHYTHM 2013 SCIENTIFIC SESSIONS INFORMATION	11–15
ACCREDITATION INFORMATION	16–18
HEART RHYTHM 2013 HIGHLIGHTED SESSION & EVENTS	19–26
EPICENTER: THE LEARNING LOUNGE	27–28
OFFICIAL EDUCATIONAL SATELLITE SYMPOSIA	29–30
RHYTHM THEATRE	31
HEART RHYTHM 2013 AWARDS	32–36
HEART RHYTHM SOCIETY LEADERSHIP	37–40
HEART RHYTHM SOCIETY INFORMATION	41–46
COLORADO CONVENTION CENTER DIAGRAMS	47–48
WEDNESDAY PROGRAM SCHEDULE	51–66
THURSDAY PROGRAM SCHEDULE	69–116
FRIDAY PROGRAM SCHEDULE	119–166
SATURDAY PROGRAM SCHEDULE	169–176
WEDNESDAY POSTER SESSIONS	180–191
THURSDAY POSTER SESSIONS	192–226
FRIDAY POSTER SESSIONS	227–260
SATURDAY POSTER SESSIONS.....	261–270
EXHIBITORS	273–304
INDEX	307–343

OVERVIEW

HEART RHYTHM 2013 MEETING INFORMATION

AGE POLICY

Due to liability restrictions, no one under the age of 16, including infants and toddlers, is permitted to attend Heart Rhythm 2013 or to enter the Exhibit Hall at any time.

ALLIED HEALTH PROFESSIONALS LOUNGE (Room 109)

Allied health professionals are invited to visit the lounge to relax, meet with colleagues, access the Internet, and recharge with light complimentary refreshments, on a first-come, first-served basis. Informal talks on career management and how to get involved with the Heart Rhythm Society will be offered—schedules will be posted in the lounge. Access to the lounge is limited to member and non-member allied health professionals.

Wednesday–Friday, May 8-10	7:30 a.m. – 6 p.m.
Saturday, May 11	7:30 a.m. – noon

ALTITUDE

Denver is the “Mile High City” – 5,280 feet above sea level. When coming from lower altitudes, you should take precautions to ensure your well being. Because of the change of oxygen intake, you might experience some dizziness, shortness of breath, headaches and/or nausea. Altitude sickness is the body’s way of coping with reduced oxygen and low humidity at high altitudes. You can reduce the impact of high altitude by drinking plenty of liquids during your stay and limiting alcohol intake for the first few days. It is a good idea to use sun screen and wear a hat when out in sunny weather. Water stations, supported by Biosense Webster, will be located throughout the Convention Center.

AMERICANS WITH DISABILITIES ACT

The Heart Rhythm Society supports the Americans with Disabilities Act. Specific aids or other services to accommodate your participation at Heart Rhythm 2013 should have been indicated at the time of registration. A staff member would have contacted each person to request how s/he may be assisted and what special arrangements need to be made prior to the meeting. If assistance is required on site, please stop by an Information Desk or the Heart Rhythm Society office, Room 202.

BADGE INFORMATION

While attending Heart Rhythm 2013, display your badge at all times in the Convention Center.

Badge Colors

Green:	Scientific Sessions Attendees
Yellow:	One-Day Registrants
Gray:	AF Summit and VT/VF Summit Only
Red:	Exhibitors and Exhibitor Guests
Blue:	Exhibitor Personnel Attending Scientific Sessions
Pink:	Attendee Guests
Orange:	Press

Security personnel will allow only persons with badges (and tickets for ticketed functions) to enter the meeting rooms and the Exhibit Hall.

Replacement badges are available at the Badge Corrections and Reprints counter in the Registration Area (Lobby A). Badges are not transferable and cannot be lent to anyone for any purpose during Heart Rhythm 2013.

CAREER RESOURCES

The Heart Rhythm Society provides employment resources for job seekers and employers in the heart rhythm field. Search listings, post a job, and browse our career development resources online at <http://www.HRSonline.org/CareerResources>.

Visit the Career Resources section of our website for:

- Job and Fellowship opportunities — Heart Rhythm Society members can post one complimentary, 30-day job posting and all fellowships may be posted for free (contact membership@HRSonline.org for discount code);
- Attendees can earn a 25 percent discount on new jobs posted before July 15. Enter code **HR2013ATTEND**;
- Professional development and practice management resources;
- Access to the EP Buyer's Guide and targeted search engine for products and services in cardiac pacing and electrophysiology;
- Volunteer opportunities; and
- Information on research funding.

Visit the Member Services Desk at Heart Rhythm Place, Booth #739 to find out more.

BUSINESS CENTER (Lobby A)

A full-service business center is located just off Lobby A in the red-carpeted corridor. Services provided include onsite printing, signage, equipment rentals, and much more. Attendees will appreciate the Hands Free Ship-It-Home Service, which stores, packs, and ships attendee items for one low price.

The Business Center also has workstations with high-speed Internet, as well as office supplies, copy, fax, and printing services. You can also upload your artwork to the Business Center website for expedited service! Contact the Business Center in advance for special printing, signage services, and rentals of copiers and fax machines at 720-904-2300.

Hours of Operation:

Monday–Friday, May 6-10	7:30 a.m. – 5:30 p.m.
Saturday, May 11	7:30 a.m. – 2 p.m.

Also, please check with your hotel concierge or front desk for business center hours and location within your hotel.

CHILDCARE

If you are interested in securing childcare during the conference, please speak with the concierge at your hotel for references to local childcare facilities.

OVERVIEW

CONVENTION CENTER LOCATIONS

Most Heart Rhythm 2013 Scientific Sessions and events will be held at the Colorado Convention Center. A small number of functions will be held at the Hyatt Regency Denver at Colorado Convention Center and the Embassy Suites and are noted accordingly.

Atrium

- Infinity Circle Lounge
- Information Desk
- Denver Info/Services Desk

Lobby A

- Attendee Registration
- Self-Registration/CME Stations
- Pocket Map Bin
- *Heart Rhythm Daily* Bin
- BusinessCenter

Lobby B

- InformationDesk
- Cyber Center/CME Stations
- Coat Check
- Shuttle Bus Drop Off/Pickup
- Infinity Circle Lounge
- Pocket Map Bin
- *Heart Rhythm Daily* Bin

Lobby D

- The Link
- Saturday Posters

Grand Concourse

- HydePark
- Pocket Map Bin
- *Heart Rhythm Daily* Bin
- Heart Rhythm On Demand

Lobby F Level One

- Coat/Luggage Check

Lobby F Level Two

- Exhibitor Registration

Level 2

- Exhibit Hall
- Heart Rhythm Place
- Poster Town/Moderated Poster Theatre
- EPicenter: The Learning Lounge
- RhythmTheatres
- The Virtual Office

E-VERSION OF FINAL PROGRAM BOOK

The Final Program Book is also available in electronic format. Download a copy to your mobile device, Kindle, or iPad by following the download instructions at www.HRSonline.org/Navigate-the-Meeting.

EMERGENCY

To report an emergency, please call extension 200 via a house phone or 303-228-8030 from outside of the Convention Center. The telephone number is a direct line to the convention center's Public Safety Department's Command Center, which is staffed 24 hours a day, seven days per week and is the emergency communications hub for the Convention Center. All house phones located within all public spaces and outside walls of exhibit halls are labeled with this number.

When reporting an emergency, please give the following information:

1. The location
2. The nature of the emergency
3. Number of persons involved
4. Nature and extent of injuries, if any
5. Any other pertinent information that may be helpful for responding emergency crews.

EXHIBIT HALL

Plan to visit more than 100 exhibitors showcasing the newest and most innovative products and services available to health care professionals working in cardiac electrophysiology and arrhythmia devices. Exhibitors are on hand to demonstrate their products and services and to answer your questions.

Exhibit Hours:

Wednesday, May 8	6 – 7:30 p.m.
Thursday, May 9	9:30 a.m. – 5 p.m.
Friday, May 10	9:30 a.m. – 5 p.m.

FELLOWS-IN-TRAINING LOUNGE (Room 107)

HRS Affiliate Members and non-member fellows-in-training are invited to visit the Fellows-in-Training Lounge. Trainees can relax, meet with colleagues, access the Internet, and recharge with complimentary light refreshments, on a first-come, first-served basis. Informal talks on career and practice management will be held Thursday and Friday with several distinguished members—schedules will be posted in the lounge. Access to the lounge is restricted to HRS Affiliate Members and non-member fellows-in-training.

Wednesday–Friday, May 8-10	7:30 a.m. – 6 p.m.
Saturday, May 11	7:30 a.m. – noon

FIRST AID STATIONS

The Colorado Convention Center will have emergency management staff available in the Medical Room located near Lobby E.

Hours of Operation:

Tuesday, May 7	8 a.m. – 7 p.m.
Wednesday, May 8	6 a.m. – 7 p.m.
Thursday–Friday, May 9-10	7 a.m. – 7 p.m.
Saturday, May 11	7:30 a.m. – 2 p.m.

FOOD OUTLETS

There will be concessions located throughout the Convention Center for your convenience.

Specific locations include:

- Exhibit Hall, Level Two (Wednesday - Friday)
- Food Court, Located Near the Grand Concourse
- Rhythm Row, Lobby A

HEART RHYTHM 2013 OFFICIAL HOTELS

For a complete listing of Heart Rhythm 2013 Official Hotels, visit www.HRSonline.org/Sessions and select Attendee Resources.

OVERVIEW

HEART RHYTHM ON DEMAND

Heart Rhythm On Demand offers access to the latest science and highlights state-of-the-art discoveries in cardiac arrhythmia research, diagnosis, treatment guidelines, and technology from the world's leading experts. Heart Rhythm On Demand features more than 350 hours of sessions from Heart Rhythm 2013 — fully synched slides and audio — and the ability to earn CME/CE credit on a select number of sessions! Order onsite by May 11 and save more than \$800!

Sales Booths are located at:

- Grand Concourse
- Heart Rhythm Place Exhibit Booth #739

HEART RHYTHM CYBER CENTER AND THE VIRTUAL OFFICE (Lobby B and Exhibit Hall)

Visit the Cyber Center (Lobby B) or the Virtual Office located Exhibit Hall (Booth #1139). At either location you can:

Communicate with HR 2013 colleagues (send/receive messages)

Print CME/CE certificates (links to public CME/survey applications)

Access the Internet (links to www.HRSONline.org)

Attendees are asked to limit each online session at the Cyber Center and Virtual Office to 10 minutes when there is a wait.

Complimentary WI-FI in the lobbies sponsored by St. Jude Medical.

HOUSING DESK (Lobby A)

While at Heart Rhythm 2013, if you have any questions regarding your hotel reservations made through Travel Planners, please consult a housing representative at the Housing Desk located in the Heart Rhythm 2013 registration area, Lobby A.

A Travel Planners representative will be available during the following hours:

Tuesday, May 7	3 – 7 p.m.
Wednesday, May 8	6 a.m. – 7 p.m.
Thursday, May 9	7 a.m. – 5 p.m.
Friday, May 10	7:30 a.m. – 5 p.m.
Saturday, May 11	7:30 a.m. – noon

INFORMATION DESKS (Main Atrium and Lobby B)

Can't find your way to the Plenary Session? Have a question? Stop by one of the Heart Rhythm 2013 Information Desks and a representative can assist you with questions and other meeting needs. If you are located outside the Convention Center, please call 303-228-8310.

Tuesday, May 7	3 – 7 p.m.
Wednesday, May 8	6 a.m. – 7 p.m.
Thursday, May 9	7 a.m. – 5 p.m.
Friday, May 10	7:30 a.m. – 5 p.m.
Saturday, May 11	7:30 a.m. – noon

INTERNET ACCESS

Please see "Heart Rhythm Cyber Center and the Virtual Office."

Complimentary WI-FI access in public spaces of the Convention Center is sponsored by St. Jude Medical.

LANGUAGE

The official language of Heart Rhythm 2013 is English. Simultaneous translation will not be available.

LOST AND FOUND (Room 202)

The Lost and Found is located in the Heart Rhythm Society Office in Room 202.

LUGGAGE/COAT CHECK (Lobby B and Lobby F)

Coat and luggage check service is available at a minimal cost per item.

Wednesday, May 8	6 a.m. – 7 p.m.
Thursday, May 9	7 a.m. – 6 p.m.
Friday, May 10	7:30 a.m. – 8 p.m.
Saturday, May 11	7:30 a.m. – 1 p.m.

NO SMOKING POLICY

Heart Rhythm 2013 is a NON-SMOKING meeting; therefore, smoking is absolutely prohibited at all times in the meeting rooms, Exhibit Hall, and restrooms. Smoking is permitted in designated areas outside the Convention Center. Your compliance is appreciated.

PARKING

Refer to the Colorado Convention Center's website for parking information, www.denverconvention.com/our-center/parking.html or you may contact the Convention Center directly at 303-228-8071.

REGISTRATION (Onsite) HOURS (Lobby A)

Tuesday, May 7	3 – 7 p.m.
Wednesday, May 8	6 a.m. – 7 p.m.
Thursday, May 9	7 a.m. – 5 p.m.
Friday, May 10	7:30 a.m. – 5 p.m.
Saturday, May 11	7:30 a.m. – noon

For your convenience, self-serve registration kiosks are available Tuesday and Wednesday where you can register for Scientific Sessions and purchase tickets to ticketed functions when paying by credit card.

OVERVIEW

RESPONSIBLE DRINKING POLICY

Alcoholic beverages are a part of some social events during Heart Rhythm 2013. An individual's decision to partake is a matter of personal choice and is neither encouraged nor discouraged by the Heart Rhythm Society. Reasonable and appropriate measures are taken by the Heart Rhythm Society, catering by Centerplate, the Colorado Convention Center and hotel staff to ensure that consumption occurs in a safe and responsible manner. All attendees are expected to exercise good judgment in their consumption of alcohol at Heart Rhythm 2013 events. Federal, state, and local laws apply. No one under the age of 21 will be served.

SAFETY RECOMMENDATIONS

To make your trip to Denver more enjoyable and safe, please follow these tips:

- Take off your badge when leaving the Convention Center.
- Do not carry the Heart Rhythm 2013 meeting bag in the evenings.
- Always walk in groups.
- Talk to the hotel concierge or hotel security regarding the surrounding neighborhoods and map out your route before you go exploring.
- Always use auxiliary-locking devices on doors and windows.
- Never leave money, checks, credit cards, extra room keys, or car keys in your hotel room—take them with you or leave them in the hotel safety deposit box or your in-room safe.
- Do not leave laptops, cell phones, or any valuables unattended anywhere in the Convention Center, hotels, or meeting rooms. The Heart Rhythm Society, IBHRE, the Colorado Convention Center, and Denver hotels are not responsible for lost or stolen items.
- If you are the victim of a crime, call the police and report the crime immediately. For crimes in progress or any life-threatening situation, dial 911 IMMEDIATELY. For suspicious activity, crimes that happened while you were away, or to give information concerning a crime, notify the security department of the specific facility where the crime occurred. At the Convention Center, you may contact security by calling 200 via a house phone.

SESSION CAPACITY

The Heart Rhythm 2013 Program Committee and the Society staff make every attempt to anticipate the sessions that may draw the largest crowds and place those sessions in the larger meeting rooms when possible. Some sessions may be very crowded; in order to accommodate as many people as possible, please find seats toward the front and move to the center of the row so that chairs are available for additional attendees. "Standing Room Only" is strictly prohibited. If there is not enough space for all those interested in attending a session, an overflow area will be designated.

SESSION FACULTY

The faculty listed in the program are invited and confirmed as of April 1, 2013. Every effort has been made to list faculty information correctly. Please accept the Society's apology for any errors or omissions. A program addendum with late changes and updates will be available in the Registration Area.

Faculty participants and curriculum contributors (including abstract reviewers) reflect educational degrees, Heart Rhythm Society designations, and certifications of the International Board of Heart Rhythm Examiners only.

SHUTTLE SERVICE

Complimentary shuttle bus transportation will be provided to registered attendees from a select group of hotels (depending on the location of the hotel) to the Colorado Convention Center beginning Wednesday, May 8 at 6:30 a.m. and continuing through Saturday, May 11 at 1:30 p.m. On routes with more than one hotel, shuttle buses will make multiple stops, so please allow sufficient time for transportation from your hotel to the Colorado Convention Center. Schedules, boarding locations, and any changes to the schedule will be available at all hotels on the shuttle bus route and in the Heart Rhythm 2013 Registration Area at the Colorado Convention Center. The hotel sleeping room rates are inclusive of a partial shuttle-busing fee. If you have questions, please call 303-228-8316.

Date	Hours of Operation
Wednesday, May 8	6:30 a.m. – 7:30 p.m.
Thursday, May 9	6:30 a.m. – 7:30 p.m.
Friday, May 10	6:30 a.m. – 8 p.m.
Saturday, May 11	6:30 a.m. – 1:30 p.m.

Walk Hotels

Courtyard by Marriott Denver Downtown
Crowne Plaza
The Curtis
Denver Marriott City Center
Embassy Suites Denver Downtown CC
Grand Hyatt Denver
Hampton Inn & Suites CC
Hilton Garden Inn Downtown Denver
Homewood Suites CC
Hotel Teatro
Hyatt Regency Denver at Colorado Convention Center
Magnolia Hotel
Sheraton Denver Hotel

Route 1 Hotels (Downtown)	Boarding Location
Comfort Inn Downtown	Curbside on Tremont Place
Brown Palace Hotel	At Comfort Inn Downtown
Hampton Inn & Suites Downtown	Curbside on Sherman St.
Warwick Hotel	Curbside on Grant St.

Route 2 Hotels (Downtown)	Boarding Location
Westin Tabor Center	Curbside on Lawrence St.
The Oxford	At Westin Tabor Center
Ritz Carlton	Curbside on 19th St.
Residence Inn Denver City Ctr.	Curbside on Champa St.

Route 3 Hotels (Downtown) †	Boarding Location
TownePlace Suites	Front entrance

Route 4 Hotels (Downtown)	Boarding Location
Residence Inn by Marriott Denver Downtown ...	Curbside on Zuni
Springhill Suites Denver at Metro State	Curbside on 12th St.

Route 5 Hotels (Cherry Creek)	Boarding Location
Holiday Inn Select Cherry Creek	Front entrance
Staybridge Suites Denver Cherry Creek	At Holiday Inn Select
Hilton Garden Inn	Curbside on Exposition Cir.

OVERVIEW

Route 6 Hotels (Cherry Creek) Boarding Location

Courtyard by Marriott Denver Cherry Creek Front entrance
Hampton Inn and Suites Cherry Creek Front entrance

Route 7 Hotels (Stapleton) Boarding Location

Doubletree Hotel Denver..... Grand Ballroom entrance
Doubletree Denver Stapleton North Front entrance
Renaissance Denver Hotel Curbside in front

Unless otherwise noted, the shuttle bus runs are every 10-15 minutes from 6:30 to 10:30 a.m. and from 4:30 p.m. to end time listed above each day. Shuttle buses run are every 20-25 minutes at all other times. Please note that boarding locations are subject to change — please see the sign located in the hotel lobby for updates and additional information.

† This route has specific scheduled service. Please see the sign in the hotel lobby for specific departure times.

SPEAKER RESOURCE CENTER AND FHRS LOUNGE (Room 605)

The Speaker Resource Center is the location for faculty and speakers to upload and review scientific session presentations. Staff is available to provide assistance and answer questions. **Speakers are reminded to have presentations uploaded 12 hours prior to the presentation time.** Fellows of the Heart Rhythm Society (FHRS) are also invited to relax and take a break in the lounge. Limited food and beverage is available on a first-come, first-served basis.

Tuesday, May 7	2 – 6 p.m.
Wednesday–Friday, May 8 – 10	7:30 a.m. – 6 p.m.
Saturday, May 11	7:30 a.m. – noon


TAPING AND PHOTOGRAPHY

Visual reproduction of Heart Rhythm 2013, whether by video or still photography, is strictly prohibited. Audio taping is also strictly prohibited. Please visit the Press Room (Room 610) in the CCC if you have any questions.

TICKETED SESSIONS

Tickets for the AF Summit, VT/VF Summit, Meet-the-Experts luncheons, and Women in EP Networking luncheon have been available since registration opened to Society members in December and non-members in January. Many sessions are sold out, but a limited number of tickets may still be available. Check availability at the onsite counters or the self-serve stations in the Registration Area. Meeting room space is limited, and tickets are required for these sessions.

All ticketed sessions are signified by the  in the program and on all session signs.

 Ticketed session; additional fee required.

WAYFINDER ONLINE PLANNER, MOBILE APP, AND KIOSKS (Lobby A, Grand Concourse, and the Exhibit Hall)

The Wayfinder allows attendees to download Heart Rhythm 2013 Scientific Session information to a PDA and/or smart phone device. The service provides attendees with the opportunity to create their own personalized itinerary for Heart Rhythm 2013 on the spot. Attendees will be able to research presentations and scientific sessions, preview details and note lectures of interest on their PDA and/or Smartphone device. The Wayfinder tool may be downloaded to your computer or mobile device by visiting www.HRSONline.org/Navigate-the-Meeting.

HEART RHYTHM 2013 SCIENTIFIC SESSIONS INFORMATION

PROGRAM SPECIALTY TRACKS

All Heart Rhythm 2013 Sessions fall under the following categories, or “specialty tracks:”

- Allied Professionals
- Basic/Translational Science
- Cardiovascular Implantable Electronic Devices & Heart Failure
- Clinical EP & Catheter Ablation
- Pediatric/Adult Congenital Heart Disease
- Policy, Payment & Practice

Specialty Tracks are assigned a color code in some Heart Rhythm 2013 Publications, which will correspond to the signs outside the session rooms.

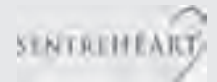
The Allied Professionals educational track is supported by an unrestricted educational grant provided by Cardiovascular Credentialing International.



The Cardiovascular Implantable Electronic Devices and Heart Failure core curricula, case-based tutorials, debate, and how-to sessions are supported by unrestricted educational grant provided by Boston Scientific.




The Clinical EP and Catheter Ablation core curricula, case-based tutorial, debate, how-to, and mini-board review sessions are supported by unrestricted educational grants provided by Biosense Webster, Inc., a Johnson & Johnson company and SentreHEART, Inc.



SESSION TAGS

Sessions are tagged to designate special session types or initiative focus in the Scientific Session listings in the Heart Rhythm 2013 Final Program Book.

ARS	Audience Response System (ARS)
ARRT	American Registry of Radiologic Technologists
FT	Fellows-in-Training
MOC	Maintenance of Certification
PM	Practice Management
	Ticketed Function

OVERVIEW

DESCRIPTION OF SESSION TYPES

CBT	Case-Based Tutorials —Teaching groups encouraging audience discussion with faculty through select case sessions utilizing the Audience Response System (ARS).
CC	Core Curricula —Didactic sessions in all major categories that provide comprehensive, timely information relevant to the care of patients or to research.
DB	Debates —Spirited debate sessions on controversial issues. New for Heat Rhythm 2013: <i>Battle of the Titans!</i>
SY	Featured Symposia —Cross-discipline showcase sessions with subject matter experts.
HP	Hyde Park Corner —A free-standing, slideless session where an appointed speaker introduces new or controversial ideas or techniques.
HT	How-To —Didactic sessions on how to perform a high-level clinical procedure.
IT	Ideas on Trial —A dynamic and interactive modification of the traditional debate session. Instead of two presenters taking the pro and con side of an issue, the actual 'idea' goes on trial.
MBR	Mini-Board Review —Held on Saturday morning, these didactic sessions will review complex questions from the board exam or IBHRE exam.
MC	Mini-Courses —Didactic courses providing in-depth updates on hot, new topics with a question and answer period to follow. Additional fee is no longer required but attendees must indicate their minicourse selections when registering.
ME	Meet-the-Experts Luncheons —Small lunch talks, without the use of audiovisual aids, which provides a scholarly exchange of information between experts and interested clinicians. Additional fee required.
PU	Pioneers Unplugged —In honor of our past, the Program Committee has developed a new session format that highlights the history, technical changes, and evolution of modern practice and patient care. Held in the EPicenter: <i>The Learning Lounge</i> , located in the Exhibit Hall.
TE	Translational Electrophysiology Sessions —Session format features a translator interpreting information for physicians and scientists.
AB/PO/MP	Oral/Poster/Moderated Poster Abstracts —Presentations in oral and poster format that provide the most up-to-date scientific research.
SP	Special Sessions —Examples include: Opening Plenary Session; Allied Professionals Orientation, and two networking lunchtime sessions; Rapid Fire Sessions; Women in EP Networking Luncheon; Young Investigator Awards Competition; Awards Ceremony and Presidents' Reception.

ORAL ABSTRACT SESSIONS

All Oral Abstract Sessions will take place during the following session times:

Thursday, May 9	1:30 – 3 p.m.
Friday, May 10	1:30 – 3 p.m.

Additionally, 17 "Abstracts Plus Sessions" will feature an Expert Commentator, who will talk at the end of the session about the abstracts that were presented. See the program schedule for specific sessions.

POSTER SESSIONS (Poster Town, Exhibit Hall)

Locations for the abstracts selected for poster presentations are listed below. Presenters will be at their posters for a scheduled one-hour session on one of the four days of the meeting. Posters will be grouped by subject and the hours are listed below.

Featured Poster Session and Reception

Wednesday, May 8
6 – 7:30 p.m.
Poster Town, Exhibit Hall
Presenters Available: 6 – 7:30 p.m.

Poster Session II

Thursday, May 9
9:30 a.m. – noon
Poster Town, Exhibit Hall
Presenters Available: 9:30 – 10:30 a.m.

Poster Session III

Thursday, May 9
2 – 5 p.m.
Poster Town, Exhibit Hall
Presenters Available: 3:30 – 4:30 p.m.

Poster Session IV

Friday, May 10
9:30 a.m. – noon
Poster Town, Exhibit Hall
Presenters Available: 9:30 – 10:30 a.m.

Poster Session V

Friday, May 10
2 – 5 p.m.
Poster Town, Exhibit Hall
Presenters Available: 3:30 – 4:30 p.m.

Poster Session VI

Saturday, May 11
9:30 a.m. – noon
Lobby D
Presenters Available: 9:30 – 10:30 a.m.

MODERATED POSTER SESSION (Poster Town, Exhibit Hall)

Each moderated poster presentation will be 10 minutes in length, led by the Presenting Author, and will include comments from an Expert Moderator. The moderated poster sessions will be presented in the “Moderated Poster Theater” section of Poster Town.

Thursday, May 9
9:30 – 10:30 a.m.
3:15 – 4:15 p.m.

Friday, May 10
9:30 – 10:30 a.m.
3:15 – 4:15 p.m.

INNOVATION ABSTRACT POSTER SESSIONS (EPicenter, Exhibit Hall)

Each Innovation Abstract poster presentation will be led by the Presenting Author. The Innovation Abstract poster sessions will be presented in the *EPicenter: The Learning Lounge* located in the Exhibit Hall.

Thursday, May 9
9:30 – 10:30 a.m.
3:15 – 4:15 p.m.

Friday, May 10
9:30 – 10:30 a.m.
3:15 – 4:15 p.m.

OVERVIEW

ABSTRACT REVIEWERS

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Andre D'Avila, MD, PhD
John D. Day, MD, FHRS
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Thomas F. Deering, MD, FHRS
Rajat Deo, MD
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Sanjay Dixit, MD, FHRS
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Edward P. Gerstenfeld, MD, FHRS
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Michael R. Gold, MD, PhD, FHRS
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Warren M. Jackman, MD, FHRS
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Pierre Jais, MD
Jose Jalife, MD, FHRS
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Robert C. Jones, MD
Mark E. Josephson, MD
Werner Jung, MD, FHRS
Alan H. Kadish, MD
Jonathan M. Kalman, MBBS, PhD
Ronald J. Kanter, MD, FHRS
Peter P. Karpawich, MD, FHRS
Elizabeth S. Kaufman, MD, FHRS
Josef Kautzner, MD, PhD
Charles Kennergren, MD, PhD, FHRS
Charles R. Kerr, MD, FHRS
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Helmut U. Klein, MD, FHRS
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OVERVIEW

ACCREDITATION INFORMATION

HEART RHYTHM 2013 PROGRAM OVERVIEW

This year's Annual Scientific Sessions will celebrate the history of the cardiac arrhythmia field and how the science, discovery, and innovation of the past and present are shaping our future. Building on years of tradition, Heart Rhythm 2013 will once again bring together the world's most noted experts in cardiac rhythm management. Here, physicians, allied health care professionals, and scientists will network and explore the latest education and technology aimed at advancing this dynamic field and improving patient care.

PROGRAM FORMAT

Heart Rhythm 2013 offers a variety of session formats, including Featured Symposia, Core Curricula, Mini-Courses, How-To, Mini-Board Review, Debates, Case-Based Tutorials, Translational EP, Special Sessions, Ideas on Trial, Hyde Park Corner, and Abstract Presentations (Poster, Oral and Moderated), as well as new formats including, Pioneers Unplugged, Rapid Fire, Battle of the Titans, and the Lead Management Forum.

HEART RHYTHM 2013 CME/CE PROGRAM OBJECTIVES

Upon completion of this educational activity, participants will be able to:

- Encourage the exchange of knowledge and ideas related to cardiac pacing and electrophysiology through oral and poster presentations, core curricula, debates, mini-courses, forums, and symposia.
- Identify and share throughout the world new advances in basic electrophysiology, arrhythmia-related genetics, clinical pharmacology, cardiac pacing, defibrillation, catheter ablation, and non-invasive diagnostic techniques.
- Promote best practices for the treatment of patients with cardiac arrhythmias through a review and application of medical society guidelines and consensus documents.
- Critically review the results of the most recent clinical trials as they relate to the care of patients with cardiac arrhythmias and heart failure.
- Educate attendees about governmental rules and regulations to optimize compliance with all applicable laws and policies.
- Recognize how new technologies can improve the quality and maximize the efficiency of electrophysiology care.

TARGET AUDIENCE

Targeted educational content for physicians, allied professionals, and basic scientists is offered as well as in-depth information across multiple disciplines, including:

- Electrophysiology
- Heart Failure
- Internal Medicine
- Echocardiology
- Cardiothoracic & Vascular Surgery
- Pediatric Cardiology
- General Cardiology
- Gene Therapy
- Cell-Based Therapies & Stem Cell Biology
- Molecular & Cellular Biology
- Pathology
- Pharmacology
- Ion Channels

CONTINUING MEDICAL EDUCATION (CME) FOR PHYSICIANS ACCREDITATION STATEMENT

The Heart Rhythm Society is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Heart Rhythm Society designates this live activity for a maximum of 24 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The AMA has determined that physicians not licensed in the USA who participate in this CME activity are eligible for *AMA PRA Category 1 Credits™*.

CONTINUING EDUCATION (CE) FOR NURSES ACCREDITATION STATEMENT

The Heart Rhythm Society designates this live activity for a maximum of 24 *AMA PRA Category 1 Credits™*. Attendees should claim only the credit commensurate with the extent of their participation in the activity.

American Nurses Credentialing Center

American Nurses Credentialing Center (ANCC) accepts *AMA PRA Category 1 Credit™* from organizations accredited by the ACCME.

American Academy of Nurse Practitioners

American Academy of Nurse Practitioners (AANP) accepts *AMA PRA Category 1 Credit™* from organizations accredited by the ACCME.

American Academy of Physician Assistants

American Academy of Physician Assistants (AAPA) accepts certificates of participation for educational activities certified for *AMA PRA Category 1 Credit™* from organizations accredited by the ACCME. Physician assistants may receive a maximum of 24 hours of Category 1 credit for completing this program.

Contact Hours for Non-Physicians

The Heart Rhythm Society has approved this activity for 24 contact hours for non-physicians.

DISCLOSURE OF FACULTY'S COMMERCIAL RELATIONSHIP(S)

It is the policy of the Heart Rhythm Society to ensure balance, independent objectivity, and scientific rigor in all its certified educational activities. Everyone involved in the planning and participation of continuing medical education activities is required to disclose any real or apparent conflicts of interest related to the content in his/her presentation(s) and also disclose discussions of unlabeled/unapproved uses of drugs or devices during his/her presentation(s).

HEART RHYTHM 2013 DISCLOSURE INFORMATION

Detailed disclosure information can be found in the faculty presentation slides and on the Online Itinerary Planner posted on the Heart Rhythm Society website, www.HRSonline.org/Sessions.

REPORTING CONFLICT OF INTEREST OR BIAS IN A PRESENTATION

Allegations of conflict of interest and bias are taken seriously and are investigated by the Ethics Oversight Committee, Scientific Sessions Program Committee and/or the Education Committee. Your complaint will be referred to the appropriate committee, and you will be informed in writing of the outcome of its review and decision. Submit a confidential complaint by completing the form at www.hrsonline.org/COI or submit an email message to scientific.sessions@HRSonline.org.

OVERVIEW

DISCLAIMER

The Annual Scientific Sessions provides a forum for the open exchange and discussion of research results and scientific advancements in the field of cardiovascular pacing and electrophysiology; however, the Society makes no representation or warranty as to the truth, originality, or accuracy of the information presented at the Annual Scientific Sessions or in materials distributed in connection with them. Nor are the views expressed by the individual speakers necessarily the views of the Society. The Heart Rhythm Society supports the ACCME's policy on evidencebased content and encourages faculty to adhere to these standards when planning a presentation.

CME/CE CERTIFICATES AND EVALUATIONS AVAILABLE ONLINE

Access certificates from your personal computer or self-service stations located in Lobby A and B. Open Thursday, May 9–Saturday, May 11.

Claim your CME/CE credits in five easy steps:

1. Visit www.HRSonline.org/Sessions/CME
2. Select Heart Rhythm 2013 CME/CE Certificates and Evaluations
3. Enter your name and badge number
4. Complete the evaluation
5. Print your certificate

SESSIONS NOT OFFERING CME/CEU

The following sessions do not offer CME/CEU Credits:

<i>Session Number</i>	<i>Session Title</i>
HP01	ICDs and End-of-Life Care
HP02	Tasers
HP03	Obamacare - Our Salvation?
HP04	Is there a Future for Academic EPs?
MP01	Inappropriate ICD Therapy: Incidence, Predictors and Outcome
MP02	Long-Term Outcomes Following Initial ICD Implantation or Generator Replacement
MP03	Novel Mapping and Ablation
MP04	Arrhythmia and Thrombus Generation
PO01	Featured Poster Session and Reception
PO02	Poster Session 2
PO03	Poster Session 3
PO04	Poster Session 4
PO05	Poster Session 5
PO06	Poster Session 6
PU01	Pioneers in Pacing
PU02	Pioneers in Clinical Electrophysiology
PU03	Pioneers in Ablation
SP05	Hands-On Session Educational Session
SP07	Opening Plenary
SP14	HRS Consensus Statement on EP Lab Standards: Ergonomics, Equipment, Personnel, Policy and Safety
SP15	"Arrest the Risk" Awareness Campaign — Survey Results
SP16	HRS/EHRA/APHRs Expert Consensus Statement on the Diagnosis and Management of Inherited Arrhythmias
SP25	HeartRhythm Journal Presents Basic/Translational Science Talks
SP26	HeartRhythm Journal Presents Clinical EP Talks
SP28	CCEP Program Directors' Luncheon: CCEP Training in 2013
SP27	Gordon K. Moe, MD, PhD — His Laboratory and His Enormous Impact on Cardiac Electrophysiology
SP29	Awards Ceremony & Presidents' Reception
SP30	Innovation Poster Session I
SP31	Innovation Poster Session II
SP32	Heart Rhythm Society's Research Fellowship Awards Breakfast

HEART RHYTHM 2013 HIGHLIGHTED SESSIONS & EVENTS

The Heart Rhythm Society's 34th Annual Scientific Sessions will attract leading cardiac arrhythmia professionals from the United States and more than 75 countries across the globe to share the latest in science, discovery, and innovation in this dynamic field. Acquire first-hand knowledge and best practices that can be immediately put into practice and learn about the emerging technologies of the future.

AF SUMMIT: AF ABLATION: STATE OF THE ART 2013 (Four Seasons Ballroom)

Wednesday, May 8 8 a.m. – 4 p.m.

The 2013 AF Summit, *AF Ablation: State of the Art 2013*, is an all-day program that provides a comprehensive review of AF ablation and evolving therapies that are changing the field. Session topics include tools and technologies for AF ablation; catheter ablation of paroxysmal AF; catheter ablation of long standing persistent AF; and stroke prevention therapies. The AF Summit will also showcase the recipient of the Founders' Lectureship Award. A separate registration fee and ticket is required for the daylong session.

Catheter Ablation of Paroxysmal AF
Catheter Ablation of Persistent and Long-Standing Persistent AF
New and Old Technologies for AF Ablation
Stroke Prevention in AF Patients

Supported by unrestricted educational grants provided by Biosense Webster, Inc., a Johnson & Johnson company, Boehringer Ingelheim, Boston Scientific, Medtronic, Inc., SentreHEART, Inc., and St. Jude Medical, Inc.

ALLIED PROFESSIONALS NEW ATTENDEE ORIENTATION (Room 401)

Wednesday, May 8 7 – 7:45 a.m.

First-time and returning attendees are invited to start your Heart Rhythm 2013 experience with the Allied Professional Ambassadors and Heart Rhythm Society President Anne M. Gillis, MD, FHRS, as they walk you through the exciting new programs available this year! This orientation session will allow you to ask questions about this year's meeting and provide insight on how to make the most out of your experience. Seating is limited.

ALLIED PROFESSIONALS FORUMS

Wednesday, May 8

The Allied Professionals Forums promote quality education for allied professionals and inspire attendees to expand scientific discovery and apply it to their daily practice. Three complimentary forums will be offered, two for those beginning their careers, emphasizing the fundamentals of EP and devices; the third with an advanced content focus. The forums include a Hands-On Educational Session.

Session SP02 Allied Professionals Forum I: Introduction to EP for the Novice Allied Professional (Room 301)
8 a.m. – 3:30 p.m.

Session SP03 Allied Professionals Forum II: Introduction to Device Therapies for the Novice Allied Professional (Room 405)
8 a.m. – 3:30 p.m.

Session SP04 Allied Professionals Forum III: Insights into Managing Complex Arrhythmia and Device Patients for the Advanced Allied Professional (Room 401)
8 a.m. – 4 p.m.

OVERVIEW

ALLIED PROFESSIONALS NETWORKING SESSIONS

Heart Rhythm 2013 offers two complimentary lunch sessions for allied professionals. Each of these sessions provides resources and information on topics relevant to allied professionals and provides an opportunity to meet and network with peers. These sessions are free to all Allied Professional attendees, but seating is limited and admittance is based on a first-come, first-served basis. A limited number of boxed lunches will be provided by the Heart Rhythm Society.

Session SP08 *Preparing for the IBHRE Exams* (Embassy Suites, Silverton Ballroom Salon 2/3)
Thursday, May 9 12:15 – 1:15 p.m.

Session SP09 *Quality Initiatives and Performance Measures - An EP Perspective* (Embassy Suites, Silverton Ballroom Salon 2/3)
Friday, May 10 12:15 – 1:15 p.m.

"ARREST THE RISK" AWARENESS CAMPAIGN SPECIAL SESSION (Room 705)

Thursday, May 9 12:15 – 1:15 p.m.

The "Arrest the Risk" special session is an ideal opportunity to learn about the Society's latest research in Sudden Cardiac Arrest, which helps to identify current awareness levels and perceptions of SCA by electrophysiologists, general cardiologists, primary care practitioners and consumers. The session will be chaired by Walter K. Clair, MD, FHRS, and Kevin L. Thomas, MD.

BASIC/TRANSLATIONAL SCIENCE FORUM (Room 505)

Wednesday, May 8 8 a.m. – 4 p.m.

Session SP06 *Heart Rhythm Systems Physiology*

Designed in partnership with the Cardiac Electrophysiology Society (CES), the Basic/Translational Science Forum is an all-day program comprised of state-of-the-art talks relevant to experimental electrophysiology, mechanisms of heart rhythm disorders, and novel therapeutics. This year's forum places particular emphasis on systems physiology approaches to heart rhythm research and therapy.

The Forum is complimentary and does not require an additional fee. The Forum will also showcase the recipient of the Douglas P. Zipes Lectureship Award, Raymond E. Ideker, MD, PhD, FHRS, University of Alabama, Birmingham, AL.

BATTLE OF THE TITANS (Mile High Room 4D)

Thursday, May 9

For the first time at Heart Rhythm, let's get ready to rumble! Two new debate sessions will place "Titan against Titan," featuring world-renowned experts with very different opinions. Don't miss these battles of a lifetime.

Session 060 *Warfarin is Obsolete*
4:30 – 5:15 p.m.

Session 071 *Are ICDs Over-Used or Under-Used*
5:30 – 6:15 p.m.

CCEP PROGRAM DIRECTORS ANNUAL LUNCHEON (by invitation only)

Thursday, May 9

12:15 – 1:15 p.m.

Session SP28 CCEP Program Directors' Luncheon: CCEP Training in 2013

The CCEP Program Directors annual luncheon provides a forum for fellowship program training directors to meet and discuss current training issues. Hosted by the Fellowship Subcommittee, chaired by Xander H. T. Wehrens, MD, PhD, FHRS, this year's event will be held in Embassy Suites, Silverton Ballroom 1.

This session is open to program directors only.

THE EP HISTORY PROGRAM (Room 201)

Friday, May 10

12:15 – 1:15 p.m.

Session SP27 Gordon K. Moe, MD, PhD - His Laboratory and His Enormous Impact on Cardiac Electrophysiology

This session will highlight the history of the Gordon K. Moe Laboratory and the many postdoctoral fellows and scholars who trained there. Participants will learn about Gordon K. Moe, the scientist, the scholar, and the warm and caring human being.

Chairs:

Albert L. Waldo, MD, FHRS, CCDS, Case Western Reserve University - University Hospitals Case Medical Center, Cleveland, OH

Charles Antzelevitch, PhD, FHRS, Masonic Medical Research Laboratory, Utica, NY

Speakers:

Gordon K. Moe: The Early years — His Education, Honors, and Positions held, including 26 years as Director of the Masonic Medical Research Laboratory

Charles Antzelevitch, PhD, FHRS, Masonic Medical Research Laboratory, Utica, NY

Gordon K. Moe: His Contributions to Science and Medicine

Jose Jalife, MD, FHRS, University of Michigan, Ann Arbor, MI

Why Scientists from Abroad Came to the Moe Laboratory

Juan Tamargo, MD, School of Medicine, University Complutense, Madrid, Spain

Gordon K. Moe: The Man

Douglas P. Zipes, MD, FHRS, Krannert Institute of Cardiology, Indianapolis, IN

Commentator

Berndt Luederitz, MD, PhD, FHRS, University of Bonn, Bonn, Germany

FELLOWS-IN-TRAINING SESSIONS

Wednesday, May 8–Saturday, May 11

Several sessions for Fellow-in-Training as well as a dedicated lounge will be offered at Heart Rhythm 2013. Fellows can customize their learning experiences by attending sessions tagged **Fellows-in-Training**. This includes case-based discussions, Mini-Board Review, and How-To sessions.

OVERVIEW

FHRS RECOGNITION AND INDUCTION LUNCHEON (by invitation only)

Friday, May 10

Noon – 1:15 p.m.

Fellows of the Heart Rhythm Society (FHRS) are invited to join their colleagues and witness the induction of new Fellows by Anne M. Gillis, MD, FHRS, Heart Rhythm Society President.

The FHRS designation distinguishes members among health care providers for their specialization in electrophysiology and pacing. Fellows are characterized by advanced training, certification and/or prominence in research. A list of FHRS members is available at www.HRSonline.org/FHRS. Fellows attending the meeting can be identified by the credentials *FHRS* on their Heart Rhythm 2013 badges.

HANDS-ON EDUCATIONAL SESSION (Room 201)

Wednesday, May 8

11 a.m. – 3:30 p.m.

(Included in full meeting, Wednesday-only, and Allied Professionals Forums registrations)

Returning this year, the Hands-On Session with Discussions in the Round at Heart Rhythm 2013 continues to offer a unique and valuable learning opportunity for attendees. Engage in informal discussion with key opinion leaders in electrophysiology and in one-on-one demonstrations of the newest technology and equipment, presented by industry experts in a relaxed learning environment. The session closely aligns with the needs of our attendees with an intuitive format and flow based on educational topics and complementary didactic mini-courses. Discussions in the Round will take place every 15 to 20 minutes between 12:15 – 2:15 p.m.

Discussion in the Round Schedule:

12:15 – 12:30 p.m.

Ethical Considerations in the Device Clinic

Julie B. Shea, MS, RNCS, FHRS, CCDS, Brigham and Women's Hospital, Boston, MA

12:40 – 12:55 p.m.

Maximizing Workflow - How to do More with Less

Aileen M. Ferrick, ACNP, FHRS, New York University School of Medicine, New York, NY

1:05 – 1:20 p.m.

Decoding the Coding Mystery - Are you Coding Appropriately?

Colleen Deighan, Cleveland Clinic, Cleveland, OH

1:30 – 1:45 p.m.

Setting up and Running an Efficient and Profitable Device Clinic

Elizabeth A. Ching, RN, FHRS, CCDS, Cleveland Clinic Foundation, Cleveland, OH

1:55 – 2:10 p.m.

Setting up a Quality Assurance Program in the EP Lab

Douglas S. Beinborn, MA, BSN, Mayo Clinic, Rochester, MN

IDEAS ON TRIAL (Mile High Room 4D)

Thursday, May 9 and Friday, May 10

Ideas on Trial sessions are debate sessions of the future! These interactive 90-minute sessions leave the traditional debate sessions on the floor of the EP lab. Instead of two debaters taking the pro and con side of an issue, the actual “idea” goes on trial with a Chief Justice and two Associate Justices presiding. Attorneys may call witnesses to help make their point to the jury, which is the audience, to make a decision as to whether the idea is “appropriate” or “guilty.” Two Ideas on Trial sessions will be presented!

Session 034 *All ICD Leads with Externalized Conductors Should Be Extracted*

Thursday, May 9 10:30 a.m. – noon

Session 090 *Left Atrial Appendage Closure is Better than Anticoagulation Therapy for Stroke Prevention in AF*

Friday, May 10 8 – 9:30 a.m.

JOINT SESSIONS WITH INTERNATIONAL ORGANIZATIONS

Thursday, May 9–Saturday, May 11

Eighteen 90-minute sessions will be offered on topics of medical and scientific interest to attendees, jointly sponsored by the international EP community. Participating organizations include:

- American College of Cardiology
- American Heart Association
- American Society of Echocardiography
- Asia Pacific Heart Rhythm Society
- Associazione Italiana di Aritmologia e Cardiostimolazione
- Brazilian Society of Cardiac Arrhythmias
- Canadian Heart Rhythm Society
- China Heart Rhythm Society
- Chinese Society of Pacing and Electrophysiology
- European Heart Rhythm Association
- Hungarian Society of Cardiology
- Israeli Working Group of Pacing and EP
- Indian Heart Rhythm Society
- Japanese Heart Rhythm Society
- Oregon Health & Science University
- Sociedad Latino Americana de Estimulación Cardíaca y Electrofiología (SOLAECE)
- Society of Cardiology of the Russian Federation
- Society of Thoracic Surgeons
- Taiwan Heart Rhythm Society
- University of Insubria, Varese, Italy
- World Society of Arrhythmias

OVERVIEW

LEAD MANAGEMENT FORUM (Room 501)

Wednesday, May 8

8 a.m. – 4 p.m.

Attendees asked for it and HRS delivered! Lead management is a “hot topic” for the EP field. This newly added forum, included in the registration fee, will explore practical aspects of lead development, implantation, follow up and extraction. This session will provide an historical overview of lead development, including lead failures from which to learn. Present development, bench testing, clinical trialing, and regulatory processes will be described, as well as requirements for future leads.

- *Lead Development*
- *Lead Implantation*
- *Lead Follow up, Troubleshooting, and Management*
- *Lead Extraction*

The Lead Management Forum is supported by unrestricted educational grants provided by Spectranetics and St. Jude Medical, Inc.

LIVE CASES PRESENTATIONS (Four Seasons Ballroom 3)

Thursday, May 9

8 – 9:30 a.m.

Friday, May 10

8 – 9:30 a.m.

The Society’s popular live case presentation provides Scientific Session attendees with a unique opportunity to observe real time case-procedures conducted by the world’s leading electrophysiology clinicians. This year, the Society will transmit four live case procedures. Two 90-minute sessions will be presented at Heart Rhythm 2013 by our hosting institutions, Mayo Clinic, located in Rochester MN, and Intermountain Medical Center, located in Salt Lake City, UT.

These highly interactive sessions are facilitated by an expert panel of physicians who are not only masters of their craft but also wonderful educators who debate and provide multiple strategies and solutions for managing procedures.

Live Case Presentations are an essential component of the Heart Rhythm Annual Scientific Session and provide a real time, case-based opportunity for enhanced comprehension of optimal performance of complex ablations.

The Live Case Presentation on Friday, May 10 is supported by an unrestricted educational grant provided by Boston Scientific.

OPENING PLENARY (BellcoTheatre)

Wednesday, May 8

5 – 6 p.m.

The Heart Rhythm Society is pleased to announce that President Bill Clinton will present the keynote address at the Opening Plenary Session at Heart Rhythm 2013 in Denver, CO.

President Clinton remains an influential international figure. His passion for improving lives through innovation and activism positions him as the perfect complement to our program, as we celebrate how our pioneering past is shaping our future.

President Clinton served the United States for eight years during a time of unprecedented prosperity and change. Now President Clinton is a powerful voice for progress around the world as he shares his unique insights and observations with audiences around the world. President Clinton's public speeches describe the challenges of globalization, emphasize our growing interdependence, and point the way toward a common future based on shared goals and values.

President Bill Clinton is the Founder of the William J. Clinton Foundation and 42nd President of the United States. After leaving the White House, President Clinton established the William J. Clinton Foundation with the mission to improve global health, strengthen economies, promote healthier childhoods, and protect the environment by fostering partnerships among governments, businesses, nongovernmental organizations, and private citizens to turn good intentions into measurable results.



President Clinton's keynote address is made possible in part through the support of VISIT Denver and the Denver Hotel & Hospitality Community.

PIONEERS UPLUGGED (EPicenter, Exhibit Hall)

In recognition of our historic past, the Program Committee has developed a new session format that highlights the history, technical changes, and evolution of modern practice and patient care.

Session PU01 *Pioneers in Pacing*

Thursday, May 9

9:30 – 10:30 a.m.

Session PU02 *Pioneers in Clinical and Basic Electrophysiology*

Thursday, May 9

3:15 – 4:15 p.m.

Session PU03 *Pioneers in Ablation*

Friday, May 10

9:30 – 10:30 a.m.

PRACTICE MANAGEMENT SESSIONS

Wednesday, May 8–Saturday, May 11

The Practice Management sessions address a variety of business related topics, including running an EP lab and starting a private practice.

OVERVIEW

RAPID FIRE CASES

Thursday, May 9 and Friday, May 10

Get the latest information – fast! New this year is the introduction of “rapid fire cases.” These 60-minute “brown bag” lunchtime sessions will feature five 4-minute case presentations followed by a 7-minute expert panel discussion and Q & A. Experts will rapidly evaluate each case and discuss potential treatment options. Two cases will be presented: one will focus on atrial fibrillation cases, the other will focus on device cases.

Session SP11 *Rapid Fire: AF*

Thursday, May 9 12:15 – 1:15 p.m.

Session SP13 *Rapid Fire: Device*

Friday, May 10 12:15 – 1:15 p.m.

SOCIETY LEADERSHIP LUNCH FORUM (709)

Wednesday, May 8 Noon – 1 p.m.

Network with Heart Rhythm Society leaders, including President Anne M. Gillis, MD, FHRS, at our annual meeting of the membership. The interactive discussion will include the Society’s recent accomplishments, upcoming activities, and how to maximize the value of membership. Non-members are welcome to attend; beverages and light lunch will be provided.

VT/VF SUMMIT (Mile High Room 2A)

Wednesday, May 8 8 a.m. – 4 p.m.

VT/VF represents another “hot topic” for cardiac arrhythmia professionals. This newly added session will discuss the historical development and state-of-the-art application of strategies to diagnose, evaluate, and treat patients with ventricular arrhythmias in the context of different cardiac diseases. A separate registration fee and ticket is required for the daylong session.

- *Historical Basis: Fundamental Concepts for Understanding the Physiology of VT*
- *Evolution of VT Substrate*
- *Clinical Management*
- *Are We There Yet? – New Endgame Strategies and Futuristic Ablation Technology*

Supported by an unrestricted educational grant provided by Biosense Webster, Inc., a Johnson & Johnson company.

WOMEN IN EP NETWORKING LUCHEON (Cripple Creek, Embassy Suites)

Thursday, May 9 12:15 – 1:15 p.m.

This luncheon will feature a presentation from current Heart Rhythm Society President Anne M. Gillis, MD, FHRS, who will present her perspective on achieving professional and personal goals in a career in electrophysiology. Participants will have the opportunity to interact with Dr. Gillis and participate in a discussion focusing on women in EP.

EPICENTER: THE LEARNING LOUNGE

Wednesday, May 8–Friday, May 10

The *EPicenter: The Learning Lounge* combines learning and networking in a special area of the Exhibit Hall dedicated to interactive learning and discovery. The EPicenter will feature:

Pioneers Unplugged Sessions– In recognition of our historic past, the Program Committee has developed a new session format that highlights the history, technical changes, and evolution of modern practice and patient care.

Innovation Place– A showcase for the latest advances for treating heart rhythm disorders, emphasizing non-FDA approved therapies and technologies or therapies currently under review by the FDA.

Mobile Applications– Hands-on demonstrations of the latest medical information technology for the digital age. Get a first-hand look at the medical “apps” that are changing the way physicians communicate with their patients, update medical records, and process reimbursement claims.

Presentation Theater– Stop by the theater for presentations on emerging therapies, processes, services, technologies, and more!

Thursday, May 9

9:30 – 10:30 a.m.

Pioneers Unplugged: Pioneers in Pacing

Chair: David L. Hayes, MD, FHRS, CCDS, Mayo Clinic, Rochester, MN

Panelists:

Harry Mond, MD, FHRS, CCDS, Royal Melbourne Hospital, Victoria, Australia

Victor Parsonnet, MD, FHRS, CCDS, Newark Beth Israel Medical Center, Newark, NJ

John D. Fisher, MD, FHRS, CCDS, Montefiore Medical Center, Bronx, NY

11 – 11:45 a.m.

The Effective Use of Social Media in Medicine

Kevin R. Campbell, MD, Wake Heart and Vascular, Raleigh, NC

12:15 – 12:30 p.m.

LifeWatch Televiewer™

John Fitzgerald, PSAST, RCIS, USM Retired, LifeWatch Services, Inc., Rosemont, IL

12:30 – 12:45 p.m.

ICD Coach: An App for ICD Patient Confidence

Samuel Sears, PhD, QOL-Apps, Greenville, NC

12:45 – 1 p.m.

Instant Heart Rate

Paul Zei, MD, PhD, FHRS, AZUMIO, Stanford, CA

1:15 – 1:45 p.m.

Difficult Coronary Sinus

Azlan Hussin, MBBS, MRCP, National Heart Institute, Kuala Lumpur, Malaysia

1:45 – 2:15 p.m.

PV Isolation

Tom De Potter, MD, OLV Hospital, Aalst, Belgium

2:15 – 2:45 p.m.

The Jurdham Procedure

Benjamin D. Elencwajg, MD, Hospital Presidente Peron, Buenos Aires, Argentina

3:15 – 4:15 p.m.

Pioneers Unplugged: Pioneers in Clinical and Basic Electrophysiology

Chair: Douglas P. Zipes, MD, FHRS, Krannert Institute of Cardiology, Indianapolis, IN

Panelists:

Benjamin J. Scherlag, PhD, Heart Rhythm Institute at the University of Oklahoma HSC, Oklahoma City, OK

David G. Benditt, MD, FHRS, CCDS, University of Minnesota Medical Center, Minneapolis, MN

Nabil E. El-Sherif, MD, FHRS, SUNY Downstate Medical Center, Brooklyn, NY

Mark E. Josephson, MD, Beth Israel Deaconess Medical Center, Boston, MA

Friday, May 10

9:30 – 10:30 a.m.

Pioneers Unplugged: Pioneers in Ablation

Chair: Eric N. Prystowsky, MD, FHRS, St Vincent Medical Group, Indianapolis, IN

Panelists:

Warren M. Jackman, MD, FHRS, University of Oklahoma Health Sciences Center, Oklahoma City, OK

Melvin M. Scheinman, MD, FHRS, University of California San Francisco, San Francisco, CA

Jeremy N. Ruskin, MD, Massachusetts General Hospital, Boston, MA

Frank I. Marcus, MD, University of Arizona Health Science Center, Tucson, AZ

OVERVIEW

11 – 11:45 a.m.	AED Management in the Community to Prevent Sudden Cardiac Death Kevin R. Campbell, MD, Wake Heart and Vascular, Raleigh, NC
12:15 – 12:30 p.m.	Maintenance Minder™ Andy Roeder, President, CardioReady, Conshohocken, PA
12:30 – 12:45 p.m.	Online Guidelines Demir Baykal, MD, Medical Software, LLC, Duluth, GA
12:45 – 1:15 p.m.	Implantable Loop Recorder: Techniques for Maximizing P Wave and Minimizing Artifacts Sasan Raeissi, MD, Good Samaritan Hospital, Cincinnati, OH
1:15 – 1:45 p.m.	Complete Fluoroscopy-Free Ablation of SVT using 3D Mapping Lee L. Eckhardt, MD, FHRS, University of Wisconsin Hospital Clinics, Madison, WI
1:45 – 2:15 p.m.	Catheter Cryoablation in a Patient with Atypical AVNRT Ngai Y. Chan, FRCP, Princess Margaret Hospital, Kowloon, Hong Kong
2:15 – 3 p.m.	Vendor-neutral Interoperability of CIEDs Data: Demonstration and Discussion of Potential Implications (HIT)
3:15 – 3:45 p.m.	Ablation for Atrial Fibrillation using Computed Tomography Mark D. Heimann, MSN, ACNP-BC, Main Line Health Services, Wynnewood, PA

INDUSTRY-EXPERT RHYTHM THEATRE AND HANDS-ON NON-CME INDUSTRY PRESENTATIONS

Heart Rhythm provided industry the opportunity to record presentations from their Industry-Expert Rhythm Theatre and Hands-On Presentations for streaming to interested professionals for the remainder of the year. This “enduring” option enables the delivery of presentations to a broader audience than attendees alone. It also provides “refresher courses” in the use and functionality of featured equipment and software packages.

Heart Rhythm Society is excited to provide our members and the larger EP Community a valuable resource through this Non-CME portal. Specialists in heart rhythm management can now view this informative content at their convenience, any time, any place.

Visit Heart Rhythm Non-CME Industry Presentations:



<http://www.heartrhythm.support.org/non-cmepresentations.html>

OFFICIAL EDUCATIONAL SATELLITE SYMPOSIA

The following programs are not part of the Heart Rhythm 2013 Scientific Sessions as planned by the Heart Rhythm Society Scientific Sessions Program Committee. The events are neither sponsored nor endorsed by the Heart Rhythm Society.

Tuesday, May 7

7 a.m. – 4:30 p.m.

The 26th Annual Fellows Course: Interpreting the Unknown Electrogram

Jointly sponsored by Postgraduate Institute for Medicine and Medtelligence, LLC

This independent educational activity is supported by an educational grant and in-kind support provided by Bard Electrophysiology

Hyatt Regency Denver at Colorado Convention Center, Capitol Ballrooms 1-4

1:30 – 7 p.m.

4th Annual Symposium on Interventional Pericardiology

Sponsored by The Cleveland Clinic Educational Foundation

Supported by unrestricted educational grants provided by multiple companies.

Hyatt Regency Denver at Colorado Convention Center, Centennial Ballrooms A-B

Wednesday, May 8

11 a.m. – 1 p.m.

10th Annual Learn From the Experts - Approach to the Unknown Tracing

Supported by a restricted educational grant provided by Medtronic, Inc.

This activity is specific to the needs of Fellows-In-Training.

Hyatt Regency Denver at Colorado Convention Center, Capital Ballrooms 1-7

The Future of Electrophysiology

Sponsored by MediaSphere Medical, LLC and Cine-Med

Supported by an unrestricted educational grant provided by St. Jude Medical

Hyatt Regency Denver at Colorado Convention Center, Centennial Ballrooms F-H

Advancing Frontiers in Electrophysiology: Improving Outcomes in Clinical Practice Through New Technologies

Jointly Sponsored by MediaSphere Medical, LLC and Cine-Med

Supported by an unrestricted educational grant provided by Philips Healthcare

Hyatt Regency Denver at Colorado Convention Center, Centennial Ballrooms A-B

7 – 10:30 pm

First Annual World Wide Lead Management Collaborative Community Meeting

Sponsored by The Cleveland Clinic Educational Foundation

Supported by unrestricted educational grants provided by multiple companies

Hyatt Regency Denver at Colorado Convention Center, Centennial Ballrooms F-H

7:30 – 9:30 p.m.

The 25th Annual Michel Mirowski Sudden Cardiac Death Symposium and Award Presentation

Sponsored by Medscape, LLC

Supported by an unrestricted educational grant provided by Boston Scientific Corporation

Hyatt Regency Denver at Colorado Convention Center, Centennial Ballroom D

Thursday, May 9

6 – 7:45 a.m.

Advancements in CRT to Improve Procedural Outcomes and Patient Care: Quadripolar Pacing Technology in Today's Practice

Jointly sponsored by MediaSphere Medical, LLC and Cine-Med

Supported by an unrestricted grant provided by St. Jude Medical

Hyatt Regency Denver at Colorado Convention Center, Capital Ballroom 4

OVERVIEW

6:30 – 7:45 a.m.

EP Fellows Breakfast Roundtable: Billing and Coding

Supported by Boston Scientific Corporation

This activity is specific to the needs of Fellows-in-Training

Crowne Plaza Hotel, Library/Museum Room

6:30 – 9:05 p.m.

Improving Clinical Outcomes in Patients with ICDs: Focus on Data, Technology, and Delivery

Jointly sponsored by Postgraduate Institute for Medicine and Medtelligence, LLC

Sponsored by an unrestricted educational grant provided by Boston Scientific Corporation

Hyatt Regency Denver at Colorado Convention Center, Centennial Ballrooms A-D

6:30 – 9:30 p.m.

Advancements in Fluoro Reduction for the Electrophysiology Lab

Sponsored by MediaSphere Medical, LLC

Supported by an unrestricted educational grant provided by Biosense Webster

Hyatt Regency Denver at Colorado Convention Center, Centennial Ballrooms F-H

Friday, May 10

6 – 7:45 a.m.

The Emerging Role of Catheter-Based Renal Denervation in the EP Lab: Meeting the Challenges of Resistance Hypertension

Jointly sponsored by MediaSphere Medical, LLC and Cine-Med

Supported by an educational grant provided by St. Jude Medical

Hyatt Regency Denver at Colorado Convention Center, Capital Ballroom 4

6:30 - 8 p.m.

Second International Contact Force Symposium

Sponsored by MediaSphere Medical, LLC

Supported by an unrestricted educational grant provided by Biosense Webster

Hyatt Regency Denver at Colorado Convention Center, Centennial Ballrooms A-C

This is an invitation only event.

Only health care professionals from outside the United States are permitted to attend this symposium. Products under IDE investigation will be discussed at this symposium and such products are not available for sale within the United States.

6:30 – 8:30 p.m.

Innovative Technologies for LAA Closure

Jointly sponsored by MediaSphere Medical, LLC and Cine-Med

Supported by an educational grant provided by SentreHEART, Inc.

Hyatt Regency Denver at Colorado Convention Center, Centennial Ballrooms F-H

RHYTHM THEATRES

Industry-Expert Presentations in Rhythm Theatres

Stop by and listen to the Industry-Expert Presentations in both Rhythm Theatres located in the Exhibit Hall – Booths #238 and #2239. A great opportunity to learn about promotional education during the Exhibit Hall breaks.

Rhythm Theatre 1 (Booth #238)

Wednesday, May 8 6:15 – 7:15 p.m.

Syncope and a Look into the Future of Syncope

Sponsored by Medtronic, Inc.

Thursday, May 9 9:30 – 10:30 a.m.

I Can See Clearly Now: SureScan® Pacemaker Systems as the New Standard of Care

Sponsored by Medtronic, Inc.

12:15 – 1:15 p.m.

Get Rhythm: Cardiac Resynchronization Therapy, New Patient Populations, & New Technologies

Sponsored by Medtronic, Inc.

3:15 – 4:15 p.m.

CareLink Express: Leveraging Technology to Create a New Standard of Care for Cardiac Device Patients in Your Hospital

Sponsored by Medtronic, Inc.

Friday, May 10 9:30 – 10:30 a.m.

Next Generation Cryoballoon: Targeting the Next Level of Patient Care

Sponsored by Medtronic, Inc.

12:15 – 1:15 p.m.

Making the Difficult Choices for Your ICD Patients

Sponsored by Medtronic, Inc.

3:15 – 4:15 p.m.

Physicians and Social Media - Current State of the Art

Sponsored by Medtronic, Inc.

Rhythm Theatre 2 (Booth #2239)

Wednesday, May 8

6:15 – 7:15 p.m.

Refer to onsite schedule.

Thursday, May 9

9:30 – 10:30 a.m.

Advances in non-invasive Electrocardiographic Mapping – Cardiolsight Technologies, Inc.

Sponsored by Cardiolsight Technologies, Inc.

12:15 – 1:15 p.m.

S-ICD® System or Transvenous ICD: How do you choose?

Sponsored by Boston Scientific Corporation

3:15 – 4:15 p.m.

Refer to onsite schedule.

Friday, May 10

9:30 – 10:30 a.m.

Refer to onsite schedule.

12:15 – 1:15 p.m.

A Closer Look at a Class III Antiarrhythmic

Sponsored by Pfizer

3:15 – 4:15 p.m.

Refer to onsite schedule.

INDUSTRY EXPERT – A.M. PRESENTATION

New at HR2013 — Industry-Expert A.M. Presentation. Take advantage of this additional opportunity to increase your interaction with attendees while educating them about your newest products!

Thursday, May 9 6 – 7:45 a.m.

Improving Clinical Practice in Patients with Atrial Fibrillation: Essentials for Allied Health Professionals

Sponsored by Janssen Pharmaceuticals, Inc.

Hyatt Regency Denver at Colorado Convention Center, Capital Ballrooms 2-3

OVERVIEW

HEART RHYTHM 2013 AWARDS

AWARDS CEREMONY AND PRESIDENTS' RECEPTION (Four Seasons Ballroom 3)

Friday, May 10

6 – 7:45 p.m.

Network with colleagues, hear final remarks by Heart Rhythm Society President Anne M. Gillis, MD, FHRS, and welcome Hugh Calkins, MD, FHRS, CCDS, as the next Heart Rhythm Society President. Additionally, the President's, Recognition, and Abstract Awards will be presented and the winners of the Young Investigators Awards Competition will be announced.

FOUNDERS' LECTURESHIP AWARD (Four Seasons Ballroom 3)

Wednesday, May 8

8 – 9:30 a.m.

The Founders' Lectureship Award is presented to an individual who has made a significant and unique contribution to the field of cardiac pacing and electrophysiology. *Presented as part of the AF Summit.*

The Science of Atrial Fibrillation 2013: Determinants of Occurrence and Implications for Therapy

Stanley Nattel, MD, FHRS, Montreal Heart Institute/Université de Montréal, Montreal, Canada

DOUGLAS P. ZIPES LECTURESHIP AWARD (Room 505)

Wednesday, May 8

3 – 3:30 p.m.

The lectureship award named for Douglas P. Zipes, MD, FHRS, recognizes an individual who has contributed to the advancement of cardiac electrophysiology in the area of basic science. *Presented as part of the Basic/Translational Science Forum.*

Rabbit Warren or Beehive: The Mechanisms of Fibrillation and Defibrillation

Raymond Ideker, MD, PhD, FHRS, University of Alabama, Birmingham, AL

RECOGNITION AWARDS

DISTINGUISHED SCIENTIST AWARD

Jeffrey E. Saffitz, MD, PhD, Beth Israel Deaconess Medical Center, Boston, MA

By: Yoram Rudy, PhD, FHRS

Presented at the Awards Ceremony and Presidents' Reception, Friday, May 10, 6 – 7:45 p.m.

DISTINGUISHED SERVICE AWARD

Gerald V. Naccarelli, MD, FHRS, Penn State University, Hershey, PA

By: Sanjeev Saksena, MBBS, FHRS

Presented at the Awards Ceremony and Presidents' Reception, Friday, May 10, 6 – 7:45 p.m.

DISTINGUISHED TEACHER AWARD

G. Neal Kay, MD, University of Alabama at Birmingham, Birmingham, AL

By: Kenneth A. Ellenbogen, MD, FHRS

Presented at the Awards Ceremony and Presidents' Reception, Friday, May 10, 6 – 7:45 p.m.

DISTINGUISHED SERVICE AWARD

Albert L. Waldo, MD, FHRS, Case Western Reserve University, Cleveland, OH

By: Melvin M. Scheinman, MD, FHRS

Presented at the Awards Ceremony and Presidents' Reception, Friday, May 10, 6 – 7:45 p.m.

PRESIDENT'S AWARDS

N. A. Mark Estes III, MD, FHRS, and David E. Haines, MD, FHRS

In recognition of exemplary leadership and longstanding contributions as Co-Chairs of the Board Review Course.

Douglas P. Zipes, MD, FHRS, and M. Joan Zipes

In recognition of exemplary contributions for the founding and leadership of the *HeartRhythm* Journal

Presented at the Awards Ceremony and Presidents' Reception, Friday, May 10, 6 – 7:45 p.m.

ABSTRACT AWARDS

HIGHEST SCORING ABSTRACT AWARDED TO WOMEN IN EP

Recognizes a female electrophysiologist through the awarding of \$1,000, a plaque, and complimentary registration to Heart Rhythm 2013 to the highest scoring abstract in all sub-categories, excluding the Allied Professional subcategory.

Comparative Safety of Anticoagulation Strategies Peri-Ablation for Atrial Fibrillation: Data From a Large Multicenter Study
Aysha Arshad, MD, The Valley Hospital, Ridgewood, NJ

Presented at the Awards Ceremony and Presidents' Reception, Friday, May 10, 6 – 7:45 p.m.

Supported by an unrestricted educational grant provided by BIOTRONIK.

HIGHEST SCORING ABSTRACT IN THE ALLIED PROFESSIONALS CATEGORY

Recognizes the presenting author of the highest scoring abstract submitted to the Allied Professional category. Included with the award is \$1,000, a plaque, and complimentary registration to Heart Rhythm 2013.

Thyrotoxicosis Occurring After The Cessation Of Amiodarone: A Need For Ongoing Surveillance
Melissa E. Middeldorp, Centre for Heart Rhythm Disorders, Adelaide, Australia

Presented at the Awards Ceremony and Presidents' Reception, Friday, May 10, 6 – 7:45 p.m.

THE ERIC N. PRYSTOWSKY EARLY CAREER RESEARCHER ABSTRACT

Promotes excellence in clinical research through the awarding of \$1,500, a plaque, and complimentary registration to Heart Rhythm 2013 to the early career researcher with the highest scoring abstract from select sub-categories in the Clinical Electrophysiology & Catheter Ablation abstract category.

Esophageal Side Effects Of Second-generation Cryoballoon Pulmonary Vein Isolation - A Call For Luminal Temperature
Alexander Fürnkranz, MD, Cardioangiologisches Centrum Bethanien, Frankfurt, Germany

Presented at the Awards Ceremony and Presidents' Reception, Friday, May 10, 6 – 7:45 p.m.

This award is supported by an unrestricted educational grant provided by the Eric and Bonnie Prystowsky Clinical Research Fund

OVERVIEW

THE ERIC N. PRYSTOWSKY FELLOW CLINICAL RESEARCH ABSTRACT

Promotes excellence in clinical research through the awarding of \$1,500, a plaque, and complimentary registration to Heart Rhythm 2013 to the fellow with the highest scoring abstract in the Clinical Electrophysiology & Catheter Ablation category.

In Hospital Atrial Fibrillation Ablation Related Complications - United States Experience of 10 years and 82,958 Procedures
Abhishek Deshmukh, MD, University of Arkansas for Medical Sciences, Little Rock, AR

Presented at the Awards Ceremony and Presidents' Reception, Friday, May 10, 6 – 7:45 p.m.

This award is supported by an unrestricted educational grant provided by the Eric and Bonnie Prystowsky Clinical Research Fund

FELLOW WITH THE HIGHEST SCORING ABSTRACT

Recognizes, through the awarding of \$1,500, a plaque, and complimentary registration to Heart Rhythm 2013, the fellow-in-training with the highest-scoring abstract in all sub-categories, excluding the Allied Professional subcategory. Fellows must be currently in a training program or no more than one year out of fellowship training as of May 2013. The research for the eligible abstract must have been started during the fellowship.

Major Vascular Injury and Cardiac Perforation Complicating Transvenous Lead Extraction - Outcomes of Patients Requiring Immediate Surgical Intervention
Michael B. Brunner, MD, Cleveland Clinic, Cleveland, OH

Presented at the Awards Ceremony and Presidents' Reception, Friday, May 10, 6 – 7:45 p.m.

YOUNG INVESTIGATORS AWARDS COMPETITION FINALISTS

Thursday, May 9 1:30 – 3:30 p.m.

Plan to attend the Young Investigators Awards (YIA) Competition as the six finalists present their research. The session takes place on Thursday, May 9, from 1:30 – 3:30 p.m., Room 205. Two winners—one in the Basic Category and one in the Clinical Category—will be announced at the Awards Ceremony and Presidents' Reception on Friday, May 10, 6 – 7:45 p.m., Four Seasons Ballroom 3. *Supported by an unrestricted educational grant provided by Medtronic, Inc.*

THE HEART RHYTHM 2013 YIA FINALISTS

- **Rajiv Mahajan, MD**, Royal Adelaide Hospital, Adelaide, Australia
- **Ajit H. Janardhan, MD, PhD**, Washington University School of Medicine, Saint Louis, MO
- **Yonathan F. Melman, MD, PhD**, Beth Israel Deaconess Medical Center, Boston, MA
- **Amir A. Schriker, MD**, UC San Diego Medical Center, La Jolla, CA
- **Nima Zamiri, MD**, University of Toronto, Toronto, ON, Canada
- **Yoshihisa Naruse, MD**, University of Tsukuba, Tsukuba, Japan

YOUNG INVESTIGATORS AWARD COMPETITION JUDGES

- **L. Brent Mitchell, MD**, Foothills Hospital, Calgary, AB, Canada (Competition Chair)
- **Isabelle Deschenes, PhD**, Case Western Reserve University, Cleveland, OH
- **Heather S. Duffy, PhD**, Beth Israel Deaconess Medical Center, Boston, MA
- **Barry London, MD, PhD**, University of Pittsburgh Medical Center, Pittsburgh, PA
- **Kumaraswamy Nanthakumar, MD**, Toronto General Hospital, Toronto, ON
- **Silvia G. Priori, MD, PhD**, Fondazione Salvatore Maugeri University of Pavia, Pavia, Italy
- **Prashanthan Sanders, MBBS, PhD, FHRS**, University of Adelaide, Adelaide, Australia

FURMAN TRAVEL WINNERS 2013

In memory of Dr. Seymour Furman, the Furman Fund has established three travel scholarships to the Heart Rhythm Society's Annual Scientific Sessions. These scholarships are intended to provide young physicians, scientists, and health care professionals who are considering a career in electrophysiology the opportunity to attend the premier Heart Rhythm Society educational function and to continue Dr. Furman's vision of educating future leaders.

Neal A. Chatterjee, MD, Clinical Fellow in Medicine, Massachusetts General Hospital, Boston, MA
Sponsored by Jagmeet P. Singh, MD, PhD, FHRS

Nathan Robert Engstrom, BS, CCDS, Cardiac Scientist, The Townsville Hospital, Tertiary Hospital of James Cook University, Queensland, Australia
Sponsored by Raibhan Yadav, MD, MBBS

Eleonora Savio Galimberti, MD, PhD
Research Fellow in Cardiovascular Medicine, Vanderbilt University School of Medicine
Nashville, TN
Sponsored by Dawood Darber, MD

The three travel scholarships will be presented by Michael J. Barber, MD, PhD, FHRS, at the VIP Reception, Tuesday, May 7, 2013, and have been sponsored by generous Society donors and grants from St. Jude Medical, Inc., and Biosense Webster, Inc., a Johnson & Johnson Company.

2012 - 2013 HEART RHYTHM SOCIETY'S RESEARCH FELLOWSHIP AWARDS BREAKFAST

Each year the Heart Rhythm Society awards full-year Research Fellowships to individuals interested in clinical and basic research relating to the latest advances in electrophysiology. These Post-Doctoral Research Fellowships include a one-year stipend of \$50,000, complimentary registration to the Heart Rhythm Society's Annual Scientific Sessions, and complimentary membership to the Society. Plan to attend the Fellowship Presentations and Awards Breakfast on Friday, May 10, 8-10 a.m. in Room 710 as the 2013-2014 recipients are announced and the following 2012-2013 Heart Rhythm Society Research Fellowship award winners present their research outcomes:

Roy Beinart, MD
The Kenneth M. Rosen Fellowship in Cardiac Pacing and Electrophysiology
Fellowship Institution: Johns Hopkins Medical Institute, Baltimore, MD
Supported by an educational grant from Medtronic, Inc.

Anand N. Ganesan, MBBS, PhD
Michel Mirowski International Fellowship in Cardiac Pacing and Electrophysiology
Fellowship Institution: University of Adelaide, Adelaide, Australia
Supported by an educational grant from Boston Scientific

Istvan Koncz, MD
The Heart Rhythm Society Fellowship in Cardiac Pacing and Electrophysiology
Fellowship Institution: Masonic Medical Research Laboratory, Utica, NY
Supported by an educational grant from St. Jude Medical

Vincenzo S. Macri, PhD
The Max Schaldach Fellowship in Cardiac Pacing and Electrophysiology
Fellowship Institution: Massachusetts General Hospital & Harvard Medical School, Charlestown, MA
Supported by an educational grant from BIOTRONIK, Inc.

OVERVIEW

Jean Provost, MS

Clinical Research Award in Honor of Mark Josephson and Hein Wellens
Fellowship Institution: Columbia University, New York, NY
Supported by an educational grant from Medtronic, Inc.

Jun Wang, PhD

The Michael Bilitch Fellowship in Cardiac Pacing and Electrophysiology
Fellowship Institution: Baylor College of Medicine, Houston, TX
Supported by an educational grant from Boston Scientific

RESEARCH FELLOWSHIP JUDGES

The Society would like to thank all members of the Fellowship Subcommittee for their hard work and dedication to the review process:

- Xander H.T. Wehrens, MD, PhD, FHRS (*Chair*)
- Sanjiv M. Narayan, MD, PhD, FHRS (*Vice Chair*)
- Peter A. Brady II, MD, FHRS
- Colleen E. Clancy, PhD
- Saumya Das, MD
- Darryl R. Davis, MD
- Timothy J. Kamp, MD, PhD
- Bharat K. Kantharia, MD, FHRS
- Bjorn C. Knollmann, MD, PhD
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- Tetsuo Sasano, MD

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OVERVIEW

EXHIBITOR ADVISORY COUNCIL

The Heart Rhythm Society Exhibitor Advisory Council (EAC) is comprised of corporate representatives from companies participating as exhibitors in the Annual Scientific Sessions. The EAC serves a critical role in educating, informing, and advising the Heart Rhythm Society leadership regarding the successful operations of the Society's Annual Exhibits Program.

Individuals who are interested in participating in the activities of the EAC should contact Maggie Domond, Heart Rhythm Society Director of Meeting Operations, for more information at mdomond@HRSonline.org. If you have any comments or concerns regarding Heart Rhythm Society's Exhibits Program, please contact any EAC member listed below, or call the Heart Rhythm Society office at 202-464-3400.

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Heart Rhythm Society Services, Inc.

Rod Williams, *Chief Executive Officer*

All staff may be reached using e-mail
(first initial plus last name@HRSonline.org).

OVERVIEW

MEMBERSHIP IN THE HEART RHYTHM SOCIETY (Booth #739)

The Heart Rhythm Society represents cardiac pacing and electrophysiology professionals, including physicians, scientists, and allied health professionals, in more than 70 countries worldwide. Membership benefits include:

- Print and online subscriptions to *HeartRhythm* Journal
- Discounts on educational courses and products, including the Annual Scientific Sessions and the Board Review Course
- Members-only access to valuable online resources, including clinical documents; webcasts; the Member Directory, and social networking tools, such as the new HRS eCommunity, an online discussion forum to help members connect and share with their colleagues
- Listing for physicians on *Find a Specialist*, a publicly searchable directory used by more than 5,000 patients and providers each month for referral purposes
- Advocacy for favorable legislation and regulations on coding, reimbursement, and coverage for heart rhythm procedures, as well as access to coding experts who can help to ensure appropriate and timely reimbursement
- *Keeping Pace*, a weekly electronic update with features on education, health policy, and member news and information

Visit www.HRSonline.org/join to learn more and apply today!

INTERNATIONAL BOARD OF HEART RHYTHM EXAMINERS (IBHRE) (Booth #739)

Pride, Knowledge, Excellence.

The International Board of Heart Rhythm Examiners (IBHRE) is proud to be recognized as the global leader in heart rhythm certification. Established in 1985, IBHRE was the first testing organization founded to raise the level of professionalism and academic credibility in cardiac pacing and electrophysiology. IBHRE certified specialists include more than 9,000 distinguished physicians and allied professionals around the world who have been tested on the scientific foundation, clinical skills, and technical knowledge required to provide and facilitate safe quality patient care in the management of arrhythmias.

IBHRE offers four unique certifications designed to demonstrate a mastery of knowledge in cardiac rhythm management:

- Certified Cardiac Device Specialist, Physician (CCDS)
- Certified Cardiac Device Specialist, Allied Professional (CCDS)
- Certified Electrophysiology Specialist, Physician (CEPS)
- Certified Electrophysiology Specialist, Allied Professional (CEPS)

To learn more, visit www.IBHRE.org.

HEARTRHYTHM: THE OFFICIAL JOURNAL OF THE HEART RHYTHM SOCIETY (Booth #739)

HeartRhythm, the official Journal of the Heart Rhythm Society and the Cardiac Electrophysiology Society, provides rapid online and print publication of the most important basic and clinical scientific developments devoted to arrhythmias, devices, and cardiovascular electrophysiology. Under the leadership of Editor-in-Chief Douglas P. Zipes, MD, FHRS, and now in its 10th year of publication, *HeartRhythm* serves the entire electrophysiology community from basic to clinical academic researchers, private practitioners, technicians, industry, and trainees.

The journal publishes the plenary address and the Douglas P. Zipes Lectureship from the Society's Annual Scientific Sessions, as well as the Gordon K. Moe Lecture presented at the Annual Cardiac Electrophysiology Meeting. *HeartRhythm* also publishes position papers and important information for Heart Rhythm Society members with supplemental issues that include abstracts from the Annual Scientific Sessions.

Visit www.heartrhythmjournal.com for more information.

HEART RHYTHM SOCIETY ONSITE OFFICE (Room 202)

Tuesday, May 7–Saturday, May 11

Society staff members are available to assist with any inquiries that you may have. Staff are available throughout the Colorado Convention Center and can be identified by their black staff ribbons and blue Heart Rhythm Society staff shirts. The onsite Society office can be reached by calling 303-228-8554.

HEART RHYTHM PLACE (Booth #739)

Heart Rhythm Place is the official booth of Heart Rhythm Society and the International Board of Heart Rhythm Examiners (IBHRE). Visit Heart Rhythm Place to network with colleagues and to learn more about programs, products, and services, including:

- Professional and Patient Education Resources
- Clinical Documents
- Coding and Reimbursement Expertise and Products
- Heart Rhythm On Demand — Heart Rhythm 2013 Full Conference Collection
- Membership and Fellowship (FHRS) Information
- Health Policy Information
- Career and Practice Management Resources, and the ability to update HRS account information
- *Rhythms in Time* Pacing and Electrophysiology Exhibit
- Heart Rhythm Advisory Panel
- Heart Rhythm Society Social Networking Resources, including HRS eCommunity, Facebook, EP Insights blog, LinkedIn, and Twitter (join the conversation by using #hrs2013 in your Tweets)
- *Meet the Authors* Presentations
- Free issues of *HeartRhythm* Journal
- Philanthropy
- Logo Merchandise (purchase through the HRS online store)

HEART RHYTHM DAILY: THE OFFICIAL NEWSPAPER OF HEART RHYTHM 2013

Located in bins throughout the CCC and at select hotels, *Heart Rhythm Daily* features articles on Heart Rhythm 2013 session highlights, interviews with key faculty and Heart Rhythm Society leaders, and updated session and Exhibit Hall information.

HEART RHYTHM 2013 PRESS ROOM (Room 610)

The Heart Rhythm 2013 Press Room provides a workplace for media representatives only. The Press Room staff arranges for all interviews and news conferences pertaining to Heart Rhythm 2013. Speakers are urged to check the Message Center daily and to contact the Press Room immediately if they receive a message regarding an interview request. All Heart Rhythm 2013 abstracts and posters are under a media embargo until time of presentation. The Heart Rhythm Society reserves the right to alter embargo times at its discretion. For more information about media embargos or for press inquiries, please contact to Kennesha Baldwin, *Director, Public Relations and Campaign Projects* at media@HRSonline.org or 202-464-3476.

Press Room Hours

Tuesday, May 7	3 – 7 p.m.
Wednesday, May 8	6 a.m. – 7 p.m.
Thursday, May 9	7 a.m. – 5 p.m.
Friday, May 10	7:30 a.m. – 5 p.m.

OVERVIEW

HEART RHYTHM SOCIETY SOCIAL NETWORKING TOOLS

Connect with colleagues, find information, and join discussions on the research and treatment of heart rhythm disorders using the following websites:

- **HRS eCommunity**
Society members can log in, at to our online discussion forum at www.HRSONline.org/community and connect with colleagues who face the same challenges and opportunities, share ideas and best practices, and learn more about the field.
- **EP Insights**
Visit the Society's blog at www.EPinsights.org to read and discuss news, commentary, and information for heart rhythm professionals, including clinical guidelines, health policy and advocacy, professional education, practice information, quality improvement, research, and the Society's Annual Scientific Sessions.
- **Facebook**
Visit or 'Like' the Society's page at www.facebook.com/HeartRhythmSociety for daily updates on events and programs, as well as news articles about heart rhythm disorders.
- **Twitter**
Visit the Society's Twitter site at www.twitter.com/HRSONline for the latest updates on Heart Rhythm 2013, including must-see events and room changes. Add #hrs2013 to your Tweets in order to join the conversation.
- **LinkedIn**
Connect with other members of the Society and the staff, review Society news and information, and post and discuss questions on this members-only group. To find out more or to become a member, contact membership@HRSONline.org.

INFINITY CIRCLE LOUNGES (Main Atrium and Lobby B)

Wednesday, May 8 – Saturday, May 11

The Heart Rhythm Society's Infinity Circle members are invited to visit the Infinity Circle Lounges located in the Main Atrium and Lobby B. The Infinity Circle Lounges acknowledge members of the 2013 Infinity Circle and provides a relaxing setting for attendees to meet with colleagues and access the Internet.

The Heart Rhythm Society's Infinity Circle has been designed to build awareness of our year-round supporters' significant contributions and to publicly recognize the importance of their role in furthering the mission of the Society and the cardiac arrhythmia profession. Infinity Circle members help fund a wide range of Heart Rhythm Society initiatives and programs, which ultimately lead to improved patient diagnosis, treatment, and care.

The 2012 Infinity Circle Members:

Platinum: Medtronic
Gold: Boehringer-Ingelheim
Boston Scientific
Silver: Biosense Webster Inc, a Johnson & Johnson company
Bristol-Myers Squibb and Pfizer, Inc.
Janssen Pharmaceuticals, Inc.
Zoll

In 2012, thanks to the generous support of the Infinity Circle, the following programs and initiatives were possible:

- 33rd Annual Scientific Sessions
- Board Review Course
- Research Fellowships
- Affiliate Membership Program
- Atrial Fibrillation Awareness and Media Campaign
- AFib Professional.org clinical community
- CRM.Cardiosource.org clinical community
- Sudden Cardiac Arrest Awareness and Media Campaign
- Arrest the Risk Media Campaign focusing on disparities of care in populations at risk for SCA
- AF Summit at Heart Rhythm 2012
- *HRS Sketcher* iPad Application
- *SCD Primary Prevention Protocol and iPad Application*
- SCAA to Z Online CME Learning Module with Medscape
- *Managing the Patient with AFib* provider pocket guide
- Transitions of Care in AFib

HEART RHYTHM PHILANTHROPIC CAMPAIGNS

The Heart Rhythm philanthropic campaigns include the Millennium Society, Architects of the Future, Legacy Gift Planning, and the Furman Fund. The Millennium Society's goal is to support the expansion of the Society's outreach with development of educational programs for physicians and health care professionals, including the Atrial Fibrillation (AFib) and Sudden Cardiac Arrest (SCA) disease state initiatives. The Health Policy Division's involvement with coalitions with other professional groups, robust legislation, reimbursement issues, and policy statements are impacted by the Millennium Society's success. Millennium Society pledges include donations of \$10,000 to \$100,000.

The **Architects of the Future campaign** is a mechanism for donors to support the Society at a personal level of giving that meets the needs of the donor. Donations are cumulative and levels of giving are from \$1 to \$9,999.

The **Society's Legacy Gift Planning** campaign is not about death, but about life — making the world a better place for future generations. Leaving a gift planning legacy is a symbol of a relationship, beyond money, with a specific cause. It enables you to make larger gifts than you could make from your annual salary, regardless of income level. It also allows you to donate assets and improve your financial and tax situation — often right away. There are several giving options available.

The **Furman Fund** was created to address three objectives: preserving an historic view of cardiac pacing and electrophysiology; inspiring clinicians, students, and patients with the rhythmic wonder of the heart; and educating the clinical and lay community about the field of cardiac rhythm management, its history of innovation, and the future potential for improving and extending the lives of arrhythmia patients.

The Furman Fund has five components: The Furman Travel Scholarship, Oral History Collection, Electricity and the Heart Web Site, Device Collection, and the Rhythms in Time exhibit at Heart Rhythm Place, Booth #739.

The Heart Rhythm Society thanks the following individuals and organizations for their Millennium Society support throughout the year:

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Stanley S. Hubbard

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Mr. James Youngblood, in memory of his parents, Mr. and Mrs. H.B. Youngblood
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OVERVIEW

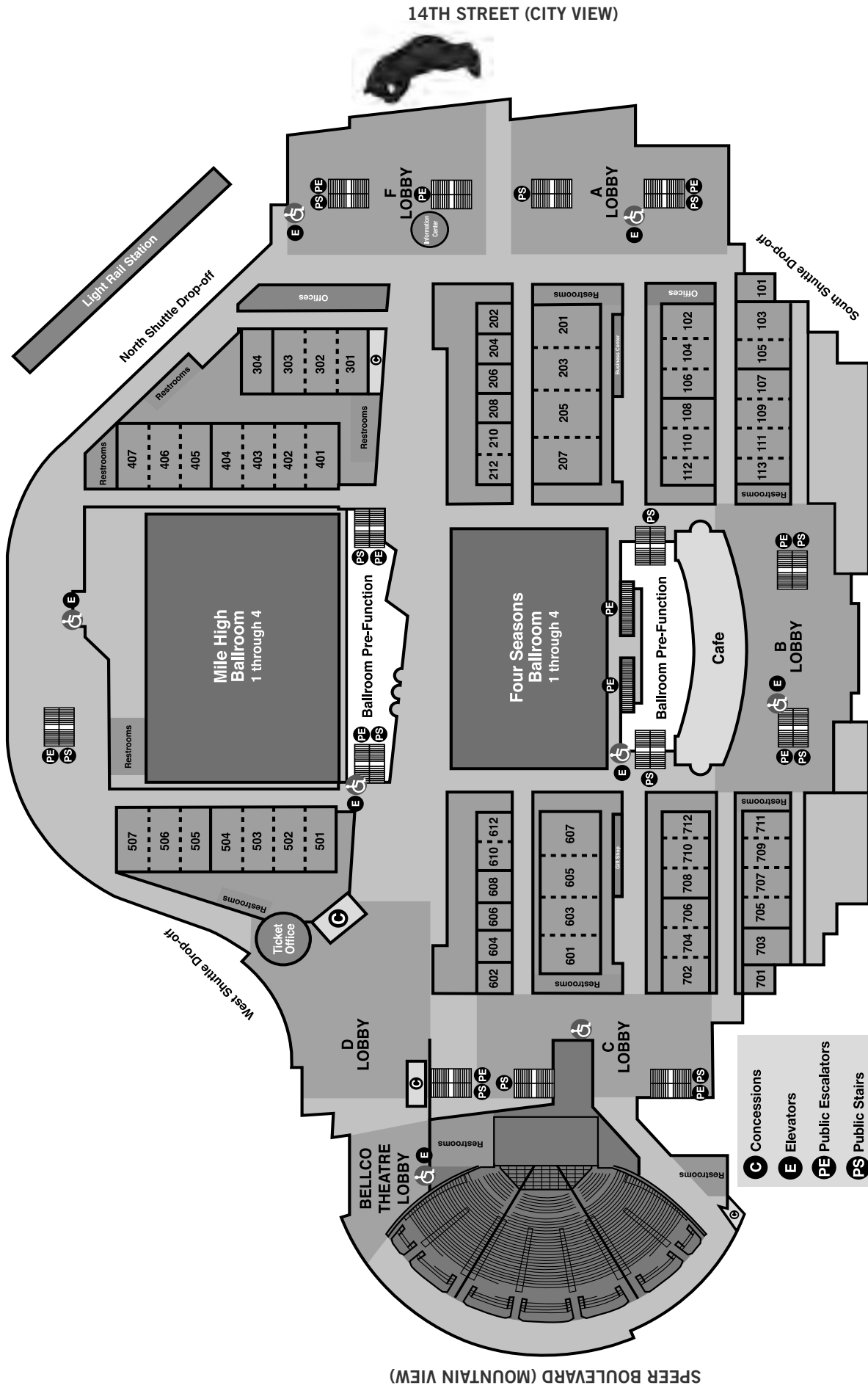
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MEETING ROOM LEVEL

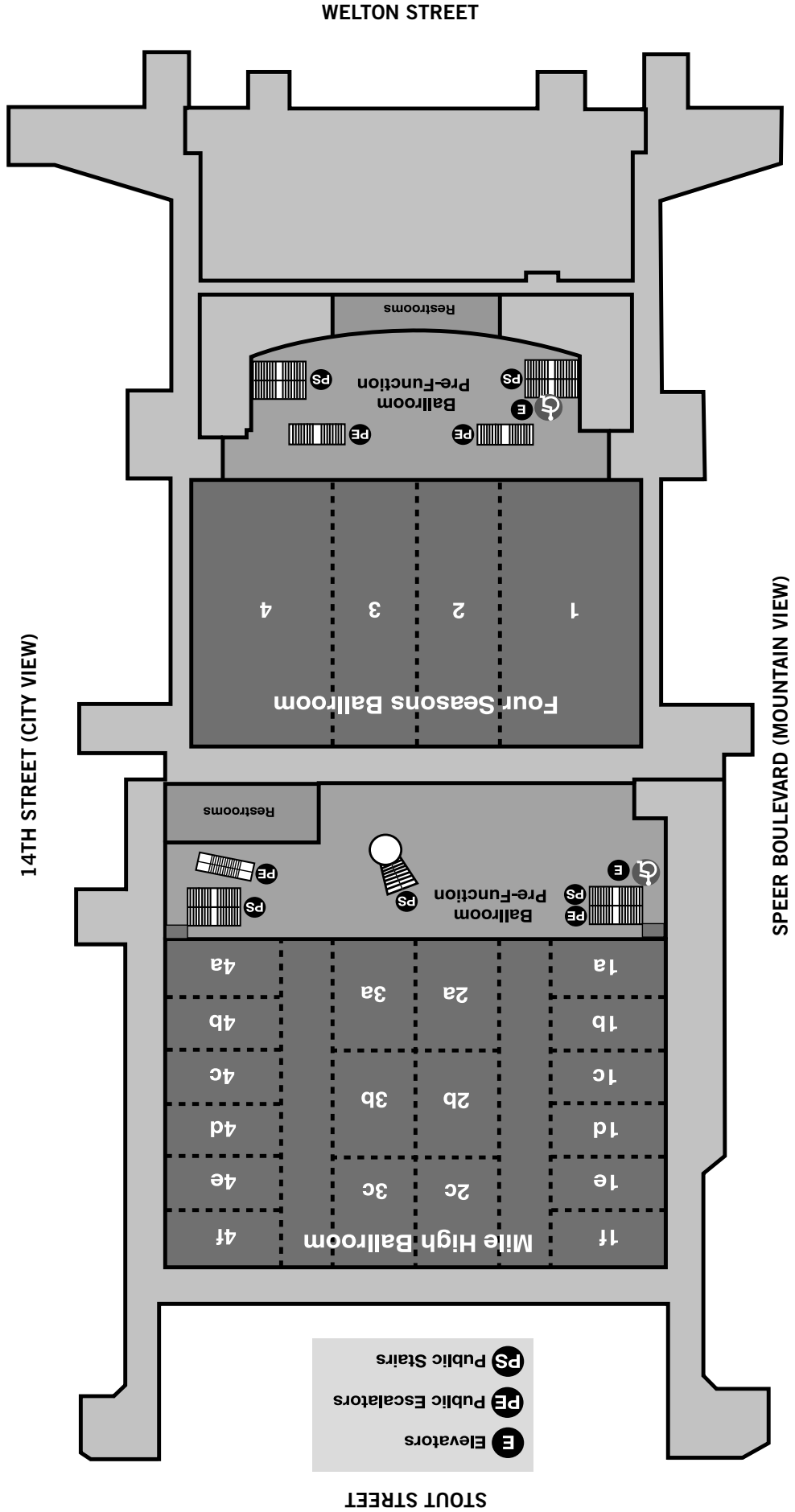
STOUT STREET



SPEER BOULEVARD (MOUNTAIN VIEW)

14TH STREET (CITY VIEW)

BALLROOM LEVEL





“Funding from HRS gave me the motivation to

continue the rigorous process of obtaining the knowledge to be of benefit to my patients, my peers, and my physician colleagues.” ~ HRS FURMAN FUND RECIPIENT



“Most people mark life milestones in years and

decades. I mark them by advancements in heart rhythm care that enable me to fully live those years and decades.” ~ PATIENT



“I give to HRS because I believe in the mission,

‘Ending Death and Suffering Due to Heart Rhythm Disorders’ and I believe in the volunteers who have demonstrated their dedication to achieving that mission.” ~ HRS INDIVIDUAL DONOR

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with cardiac rhythm disorders around the world.**

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Wednesday, May 8

Please note: All events will take place in the Colorado Convention Center unless otherwise noted.

6 a.m. – 7 p.m.

Registration Open
Lobby A

7 – 7:45 a.m.

Allied Professionals: New Attendee Orientation
Room 401

8 – 11 a.m.

Mini Courses

8 a.m. – 3:30 p.m.

Allied Professionals Forum I
Introduction to EP for the Novice Allied Professional
Room 301

Allied Professionals Forum II
Introduction to Device Therapies for the Novice Allied Professional
Room 405

8 a.m. – 4 p.m.

Allied Professionals Forum III
Insights into Managing Complex Arrhythmia and Device Patients for the Advanced Allied Professional
Room 401

AF Summit
AF Ablation: State of the Art 2013
Four Season Ballroom

VT/VF Summit
Techniques for Success and Tools for the Future
Mile High Room 2A

Lead Management Forum
Room 501

Basic/Translational Science Forum
Heart Rhythm Systems Physiology
Room 505

WEDNESDAY

8:40 – 8:55 a.m.

Heart Rhythm Society Founders' Lecture
*The Science of Atrial Fibrillation 2013:
Determinants of Occurrence and Implications
for Therapy*
Stanley Nattel, MD, FHRS, Montreal Heart
Institute/Université de Montréal, Montreal,
QC, Canada
Four Season Ballroom

11 a.m. – 3:30 p.m.

Hands On Educational Session
Room 201

Noon – 1 p.m.

Society Leadership Lunch Forum
Room 709

1 – 3:30 p.m.

Mini-Courses

3 – 3:30 p.m.

Douglas A. Zipes Lecture:
*Rabbit Warren or Beehive: The Mechanisms
of Fibrillation and Defibrillation*
Raymond E. Ideker, MD, PhD, FHRS,
University of Alabama, Birmingham, AL
Room 501

5 – 6 p.m.

Opening Plenary
President Bill Clinton
Bellco Theatre

6 – 7:30 p.m.

Exhibit Hall Open

Featured Poster Session and Reception
Poster Town, Exhibit Hall

AF SUMMIT: STATE OF THE ART 2013

8:00 a.m. – 3:30 p.m.

Supported by unrestricted educational grants provided by Biosense Webster, Inc., a Johnson & Johnson company, Boehringer Ingelheim, Boston Scientific, Medtronic, Inc., SentreHEART, Inc., and St. Jude Medical, Inc.

Session AF01. CATHETER SUMMIT OF PAROXYSMAL AF

Special Session

Four Seasons Ballroom

8:00 a.m. - 9:50 a.m.

AF Summit

CME/CE Hours: 1.5

Session Description: This session will discuss the key aspects and considerations of catheter ablation of paroxysmal atrial fibrillation.

Chairs: David J. Callans, MD, FHRS, CCDS, *University of Pennsylvania, Philadelphia, PA*
Riccardo Cappato, MD, FHRS, *IRCCS Policlinico San Donato, San Donato Milanese, Italy*

8:05 a.m. Summit Introductions and Overview
Hugh Calkins, MD, FHRS, CCDS, *Johns Hopkins Hospital, Baltimore, MD*

8:25 a.m. Technique and Long Term Outcomes of Ablation of Paroxysmal AF?
Jonathan S. Steinberg, MD, FHRS, *Valley Health System, New York, NY*

8:40 a.m. Founders Lectureship Award - The Science of Atrial Fibrillation 2013: Determinants of Occurrence and Implications for Therapy
Stanley Nattel, MD, FHRS, *Montreal Heart Institute/Université de Montréal, Montreal, QC, Canada*

8:55 a.m. Techniques and Outcomes of Autonomic Ganglion Ablation: Does it Really Add?
Sunny S. Po, MD, PhD, *Oklahoma University Health Science Center, Oklahoma City, OK*

Q & A Moderator
Sang Yong Ji, MD, *Johns Hopkins University, Baltimore, MD*

9:30 a.m. Atrial Fibrillation Sources Targeted for Focal Impulse and Rotor Modulation (FIRM) Are Stable in Location for Thousands of Cycles
Vijay Swarup, MD, FHRS, David Krummen, MD, John Miller, MD, Sanjiv M. Narayan, MD, PHD, FHRS, Ruchir Sehra, MD and Kalyanam Shivkumar, MD, PHD, *UCLA Cardiac Arrhythmia Center, Los Angeles, CA*

9:45 a.m. In-hospital Atrial Fibrillation Ablation-related

Complications - United States experience of 10 years and 82,958 procedures

Abhishek Deshmukh, MD, Nileshkumar J. Patel, MD, Sadip Pant, MD, Ankit Chothani, MD, Chaitanya Musham, MD, MPH, Kevin Hayes, MD, Neeraj N. Shah, MD, Apurva Badheka, MD, Peeyush Grover, MD, Vikas Singh, MD, Kathan Mehta, MD, Hakan Paydak, MD and Juan F. Viles Gonzales, MD, *Drexel University School of Public Health, Philadelphia, PA*

Session AF02. CATHETER ABLATION OF PERSISTENT AND LONG STANDING PERSISTENT AF

Special Session

Four Seasons Ballroom

10:00 a.m. - 12:00 p.m.

AF Summit

CME/CE Hours: 2.25

Session Description: This session will discuss the key aspects and considerations of catheter ablation of persistent and longstanding persistent atrial fibrillation

Chairs: David E. Haines, MD, FHRS, *William Beaumont Hospital - Dept. CV Medicine & EP Services, Royal Oak, MI*
Francis E. Marchlinski, MD, FHRS, *University of Pennsylvania Health System, Philadelphia, PA*

10:00 a.m. Basic Mechanisms of Persistent and Long Standing Persistent AF
Jose Jalife, MD, FHRS, *University of Michigan, Ann Arbor, MI*

10:15 a.m. Mapping of AF in Humans: Lesson Learned
Albert L. Waldo, MD, FHRS, CCDS, *Case Western Reserve University - University Hospitals Case Medical Center, Cleveland, OH*

10:30 a.m. The Sequential Approach to Ablation of Long Standing Persistent AF
Thomas Rostock, MD, *Johannes Gutenberg-University Mainz, University Hospital, II. Medical Clinic - Dept. of Electrophysiology, Hamburg, Germany*

10:45 a.m. Techniques and Outcomes of Rotor Based Ablation of Persistent and Long Standing Persistent AF
Sanjiv M. Narayan, MD, PhD, FHRS, *University of California San Diego VA Medical Center, San Diego, CA*

11:00 a.m. Mapping Human Atrial Fibrillation to Guide Catheter Ablation
Michel Haissaguerre, PhD, *Hopital Cardiologique Haut Leveque - Université Bordeaux, Pessac, France*

11:15 a.m. Surgical and/or Hybrid Ablation of Long Standing Persistent AF: Techniques and Results

WEDNESDAY

Harry J. G. Crijns, MD, PhD, *University Hospital Maastricht, Maastricht, Netherlands*

11:30 a.m. Panel Discussion

Q & A Moderator
Sang Yong Ji, MD, *Johns Hopkins University, Baltimore, MD*

John D. Day, MD, FHRS, *Intermountain Medical Center, Salt Lake City, UT*

2:00 p.m. Panel Discussion

Q & A Moderator
Sang Yong Ji, MD, *Johns Hopkins University, Baltimore, MD*

Session AF03. NEW AND OLD TECHNOLOGIES FOR AF ABLATION

Special Session

Four Seasons Ballroom 12:30 p.m. - 2:15 p.m.

AF Summit

CME/CE Hours: 1.75

Session Description: This session will discuss new technologies to aid catheter ablation of atrial fibrillation as well as old time-proven technologies associated with catheter ablation of atrial fibrillation

Chairs: David T. J. Keane, MD, PhD, FHRS, CCDS, *St. Vincent's University Hospital, Dublin 4, Ireland*
Walid I. Saliba, MD, FHRS, *Cleveland Clinic Foundation, Cleveland, OH*

12:35 p.m. Creating Lesions with Catheters: What Energy Source or Approach Leads to the Best Lesions?
David E. Haines, MD, FHRS, *William Beaumont Hospital - Dept. CV Medicine & EP Services, Royal Oak, MI*

12:50 p.m. The Cabana Trial: An Update
Douglas Packer, MD, FHRS, *Mayo Clinic - St. Mary's Hospital, Rochester, MN*

1:00 p.m. Force Sensing Catheters: Have Our Hopes Been Realized?
Karl-Heinz Kuck, MD, FHRS, *Asklepios Klinik St. Georg, Hamburg, Germany*

1:10 p.m. Catheter Cryoballoon: Current Techniques and Outcomes
D. Wyn Davies, MD, FHRS, *St. Mary's Hospital, London, United Kingdom*

1:20 p.m. Renal Denervation to Facilitate Outcome of AF Ablation
Dominik K. Linz, MD, *Universitätsklinikum des Saarlandes Klinik für Innere Medizin III, Homburg/Saar, Germany*

1:30 p.m. Catheter Ablation of AF Guided by MR Imaging: Are We There Yet?
Nassir F. Marrouche, MD, FHRS, *University of Utah, Salt Lake City, UT*

1:40 p.m. Real Time Monitoring of Lesion Development: Ready for Prime Time?
Dipen C. Shah, MD, FHRS, *Hopital Cantonal De Geneve - Div. of Cardiology, Geneva, Switzerland*

1:50 p.m. Preventing Complications of AF Ablation: Back to the Basics in High Tech World

Session AF04. STROKE PREVENTION IN AF PATIENTS

Special Session

Four Seasons Ballroom 2:30 p.m. - 4:00 p.m.

AF Summit

CME/CE Hours: 1.5

Session Description: This session will discuss how to prevent atrial fibrillation strokes as well as potential treatment options to minimize the atrial fibrillation stroke risk.

Chairs: Albert L. Waldo, MD, FHRS, CCDS, *Case Western Reserve University - University Hospitals Case Medical Center, Cleveland, OH*
Michael D. Ezekowitz, MD, PhD, *Lankenau Medical Center, Wynnewood, PA*

2:35 p.m. Coumadin: A Look Back and a Look Forward
John Camm, MD, FHRS, *St. George's University of London, London, United Kingdom*

2:50 p.m. Dabigatran, Xarelto, and Apixaban: What Have We Learned in Clinical Trials and with Clinical Experience?
Michael D. Ezekowitz, MD, PhD, *Lankenau Medical Center, Wynnewood, PA*

3:05 p.m. Risk Stratification of Stroke Risk in AF Patients
Paulus F. Kirchhof, MD, *University of Birmingham Center for Cardiovascular Sciences, Birmingham, United Kingdom*

3:15 p.m. How Effective in Appendage Ligation/Occlusion/Resection in Reducing Stroke Risk: My Perspective
Andre D'Avila, MD, PhD, *Mount Sinai Hospital, New York, NY*

3:25 p.m. Mechanical Appendage Occlusion Devices: Where Are They Now?
Vivek Y. Reddy, MD, *Mount Sinai School of Medicine, New York, NY*

3:35 p.m. The Lariat Device and Other Epicardial Approaches for Appendage Occlusion
Randall J. Lee, MD, PhD, *University of California, San Francisco, CA*

3:45 p.m. Closing Remarks
John D. Day, MD, FHRS, *Intermountain Medical Center, Salt Lake City, UT*

HR 2013

VT/VF SUMMIT: TECHNIQUES FOR SUCCESS AND TOOLS FOR THE FUTURE

8:00 a.m. – 3:30 p.m.

Supported by an unrestricted educational grant provided by Biosense Webster, Inc., a Johnson & Johnson company.

Session VT01. HISTORICAL BASIS: FUNDAMENTAL CONCEPTS FOR UNDERSTANDING THE PHYSIOLOGY OF VT

Special Session

Mile High Room 2A

8:00 a.m. - 9:35 a.m.

VT/VF Summit

CME/CE Hours: 1.5

- Chair:** Mark E. Josephson, MD, *Beth Israel Deaconess Medical Center, Boston, MA*
- 8:00 a.m.** Anatomic and Electrical Substrate of VT
Mark E. Josephson, MD, *Beth Israel Deaconess Medical Center, Boston, MA*
- 8:20 a.m.** Insights From Intraoperative Mapping
John M. Miller, MD, FHRs, *Indiana University School of Medicine, Indianapolis, IN*
- 8:40 a.m.** Autonomic Nervous System Influences on VT and VF
Douglas P. Zipes, MD, FHRs, *Krannert Institute of Cardiology, Indianapolis, IN*
- 9:00 a.m.** Understanding the Nature of Ventricular Fibrillation and Defibrillation
Raymond E. Ideker, MD, PhD, FHRs, *University of Alabama, Birmingham, AL*
- 9:20 a.m.** Ablation of VF
Samuel J. Asirvatham, MD, FHRs, *Mayo Clinic, Rochester, MN*

Session VT02. EVOLUTION OF VT SUBSTRATE

Special Session

Mile High Room 2A

9:50 a.m. - 12:00 p.m.

VT/VF Summit

CME/CE Hours: 2

- Chair:** Timm-Michael Dickfeld, MD, PhD, *University of Maryland, Baltimore, MD*
- 9:55 a.m.** CT/MR Imaging
Saman Nazarian, MD, PhD, FHRs, *Johns Hopkins University, Baltimore, MD*
- 10:25 a.m.** PET/ICE Imaging
Mathew D. Hutchinson, MD, FHRs, *University of Pennsylvania, Philadelphia, PA*

- 10:55 a.m.** Historical Development of the Science of Risk Stratification
Ralph Lazzara, MD, FHRs, *Heart Rhythm Institute at the University of Oklahoma Health Sciences Center, Oklahoma City, OK*
- 11:25 a.m.** Non-Imaging Approaches to Arrhythmia Substrate
Jeffrey J. Goldberger, MD, FHRs, *Northwestern Memorial Hospital, Chicago, IL*

Session VT03. CLINICAL MANAGEMENT

Special Session

Mile High Room 2A

12:30 p.m. - 2:15 p.m.

VT/VF Summit

CME/CE Hours: 1.75

- Chair:** Francis E. Marchlinski, MD, FHRs, *University of Pennsylvania Health System, Philadelphia, PA*
- 12:35 p.m.** Overview: Evaluation of Patients with VT, Understanding ECG/Anatomy
William G. Stevenson, MD, FHRs, *Brigham and Women's Hospital, Boston, MA*
- 1:00 p.m.** Acute and Chronic Pharmacologic Therapy
Peter R. Kowey, MD, FHRs, *Mainline Heart Center, Wynnewood, PA*
- 1:25 p.m.** Device Treatment: New Algorithms to Prevent Shock, Effect of BiV Pacing, SubQ ICD
Michael R. Gold, MD, PhD, FHRs, *Medical University of South Carolina, Charleston, SC*
- 1:50 p.m.** Where Ablation fits in the Course of Patients with VT
David J. Callans, MD, FHRs, CCDS, *University of Pennsylvania, Philadelphia, PA*

Session VT04. ARE WE THERE YET? - NEW ENDGAME STRATEGIES AND FUTURISTIC ABLATION TECHNOLOGY

Special Session

Mile High Room 2A

2:30 p.m. - 4:00 p.m.

VT/VF Summit

CME/CE Hours: 1.5

- Chair:** Douglas Packer, MD, FHRs, *Mayo Clinic - St. Mary's Hospital, Rochester, MN*
- 2:35 p.m.** LAVA Ablation
Pierre Jais, MD, *CHU Bordeaux - Bordeaux University, Bordeaux, France*
- 2:55 p.m.** Anatomic Endpoints for Substrate Ablation
Francis E. Marchlinski, MD, FHRs, *University of Pennsylvania Health System, Philadelphia, PA*
- 3:15 p.m.** Surgical Ablation
Sanjay Dixit, MD, FHRs, *Hosp of The University of Pennsylvania, Philadelphia, PA*
- 3:35 p.m.** VF Ablation and New Ablation Technologies

WEDNESDAY

Samuel J. Asirvatham, MD, FHRS, *Mayo Clinic, Rochester, MN*

LEAD MANAGEMENT FORUM

8:00 a.m. – 3:30 p.m.

Supported by unrestricted educational grants provided by Spectranetics and St. Jude Medical, Inc.

Session LM01. LEAD DEVELOPMENT

Cardiovascular Implantable Electronic Devices & Heart Failure
Room 501 8:00 a.m. - 9:35 a.m.
Lead Management Forum FIT
CME/CE Hours: 1.25

Session Description: This session will provide an historical overview of lead development including lead failures to learn from. Present development, bench testing, clinical trialing and regulatory processes will be described as well as requirements for future leads.

Chairs: G. Frank O. Tyers, MD, *Vancouver Acute Care Hospitals, Vancouver, BC, Canada*
Ali Oto, MD, FHRS, *Hacettepe University School of Medicine - Div. of Cardiology, Ankara, Turkey*

8:05 a.m. A Historic Perspective on Lead Development
Harry Mond, MD, FHRS, CCDS, *Royal Melbourne Hospital, Victoria, Australia*

8:25 a.m. Lessons Learned: Earlier Lead Failures
Andrew E. Epstein, MD, FHRS, *University of Pennsylvania, Philadelphia, PA*

8:45 a.m. New Leads: Development, Testing, Clinical Evaluation, and Regulatory Approval
Jeffrey A. Brinker, MD, *Johns Hopkins Hospital, Baltimore, MD*

9:05 a.m. Are Leads Needed in the Future and if so what are the Requirements?
Bruce L. Wilkoff, MD, FHRS, CCDS, *Cleveland Clinic, Cleveland, OH*

Session LM02. LEAD IMPLANTATION

Cardiovascular Implantable Electronic Devices & Heart Failure
Room 501 9:50 a.m. - 12:00 p.m.
Lead Management Forum FIT
CME/CE Hours: 2

Session Description: This session will describe how to select best lead for each purpose, implantation techniques, and the prevention and treatment of implantation related complications.

Chairs: Antonio Raviele, MD, FHRS, *ALLiance to Fight Atrial Fibrillation, Venice-Mestre, Italy*
Michael Glikson, MD, *Sheba Medical Center, Ramat Gan, Israel*

9:55 a.m. Selecting the Best Lead for Each Purpose and Patient
Charles J. Love, MD, FHRS, CCDS, *Ohio State University, Columbus, OH*

10:25 a.m. Best Cephalic, Subclavian, and Alternative Implantation Techniques
Suneet Mittal, MD, FHRS, *The Valley Health System of New York and New Jersey, New York, NY*

10:55 a.m. LV Lead Implantation Techniques, Including Epicardial
Seth J. Worley, MD, FHRS, *The Heart and Vascular Institute of Lancaster General Hospital, Lancaster, PA*

11:25 a.m. Prevention and Treatment of Lead Implantation Complications Including Treatment of Leads in the LA/LV
Neil F. Strathmore, MBBS, FHRS, CCDS, *Royal Melbourne Hospital, Melbourne, Australia*

Session LM03. LEAD FOLLOW-UP, TROUBLE-SHOOTING, AND MANAGEMENT

Cardiovascular Implantable Electronic Devices & Heart Failure
Room 501 12:30 p.m. - 2:15 p.m.
Lead Management Forum FIT
CME/CE Hours: 1.5

Session Description: This session will describe methods for lead follow-up and trouble-shooting, as well as the management of infected, superfluous and recalled leads.

Chairs: Massimo Santini, MD, *Ospedale San Filippo Neri, Rome, Italy*
John Camm, MD, FHRS, *St. George's University of London, London, United Kingdom*

12:30 p.m. Follow-up and Trouble Shooting of Brady, Tachy, CS and Epicardial Leads
Paul A. Levine, MD, FHRS, *Loma Linda University School of Medicine and University California Los Angeles, Loma Linda, CA*

12:55 p.m. Managing Infected Leads
Maria Grazia Bongiorno, MD, *University Hospital of Pisa - Dept. of Cardiology, Pisa, Italy*

1:20 p.m. Managing Functional and Non-functional Superfluous Leads
Seth J. Worley, MD, FHRS, *The Heart and Vascular Institute of Lancaster General Hospital, Lancaster, PA*

1:55 p.m. Managing Recalled Leads
Frank A. Bracke, MD, *Catharina Hospital, Eindhoven, Netherlands*

HR 2013

Session LM04. LEAD EXTRACTION

Cardiovascular Implantable Electronic Devices & Heart Failure
Room 501 2:30 p.m. - 4:00 p.m.
Lead Management Forum FIT
CME/CE Hours: 1.25

Session Description: This session will describe techniques for lead extraction and the management of patients with occluded veins, as well as prevention of lead extraction complications.

Chairs: Charles Kennergren, MD, PhD, FHRS, *Sahlgrenska University Hospital, Gothenburg, Sweden*
Jean Claude Deharo, MD, *Hôpital La Timone, Marseille, France*

2:35 p.m. Techniques for Lead Extraction
Oussama M. Wazni, MD, *Cleveland Clinic, Cleveland, OH*

2:55 p.m. Past and Present Results of Lead Extraction in Small, Medium and Large Centers
Gemma Pelargonio, MD, *Catholic University - Istituto Di Cardiologia, Rome, Italy*

3:15 p.m. Managing Patients with Occluded Veins from a Leads Perspective
Roger G. Carrillo, MD, FHRS, CCDS, *University of Miami Hospital, Miami, FL*

3:35 p.m. Prevention and Treatment of Lead Extraction Complications
Charles L. Byrd, MD, *CL Byrd MD, Weston, FL*

ALLIED PROFESSIONAL FORUMS

7:00 a.m. – 3:30 p.m.

Session SP01. ALLIED PROFESSIONALS: NEW ATTENDEE ORIENTATION

Allied Professionals
Room 401 7:00 a.m. - 7:45 a.m.
Special Session FIT
CME/CE Hours: 0

Session Description: This session is designed to assist the Allied Professional in learning to navigate the HRS sessions. It will include highlights of the sessions and review of sessions designed for the Allied Professional.

Chairs: Craig Swygman, CVT, FHRS, CEPS, *Providence St. Vincent Hospital, Portland, OR*
Laurie K. Racenet, ANP, CCDS, CEPS, *Alaska Heart Institute, Anchorage, AK*

7:00 a.m. Welcome and Introduction
Craig Swygman, CVT, FHRS, CEPS, *Providence St. Vincent Hospital, Portland, OR*

7:05 a.m. Thoughts From the President of the Heart Rhythm Society
Anne M. Gillis, MD, FHRS, *University of Calgary - Libin Cardiovascular Institute of Alberta, Calgary, AB, Canada*

7:15 a.m. Abstract Sessions and Allied Posters
Robin A. Leahy, RN, BSN, CCDS, *Sanger Heart and Vascular Institute, Charlotte, NC*

7:25 a.m. Orientation to HRS Structure and Committees
Douglas S. Beinborn, MA, BSN, *Mayo Clinic, Rochester, MN*

7:35 a.m. Q & A

Session SP02. ALLIED PROFESSIONALS FORUM I: INTRODUCTION TO EP FOR THE NOVICE ALLIED PROFESSIONAL

Allied Professionals
Room 301 8:00 a.m. - 3:30 p.m.
Special Session ARRT
CME/CE Hours: 3.75

Session Description: This session is designed for the Allied Professional who is relatively new to the field. It will include an overview of diagnostic and therapeutic EP procedures and will feature an interactive format using the audience response system. Time will be provided after the didactic sessions for "hands-on" with EP diagnostic and therapeutic equipment.

Chairs: Jill L. Repoley, MSN, NP, FHRS, CCDS, CEPS, *The Heart Group of Lancaster General Health, Lancaster, PA*
Christine C. Chiu-Man, MS, FHRS, CCDS, CEPS, *The Hospital for Sick Children, Toronto, ON, Canada*

8:05 a.m. Cardiac Anatomy Relevant to Electrophysiology
Victor Chacon, MD, *Sanger Heart & Vascular Institute, Charlotte, NC*

8:35 a.m. Cellular Electrophysiology: The Action Potential and Ion Channels
Joshua M. Cooper, MD, *Hospital of University of Pennsylvania, Philadelphia, PA*

9:15 a.m. Basic Catheter Placement and Electrogram Interpretation
Rutuke K. Patel, PA-C, *Hospital of the University of Pennsylvania, Philadelphia, PA*

10:00 a.m. Break

10:15 a.m. Pacing Protocols and Electrophysiologic Evaluation
Esther M. Weiss, MSN, APN, CNS, CCDS, CEPS, *Sherman Hospital, Elgin, IL*

10:45 a.m. What Rhythms Do We Treat with Ablation and How Do We Do It?
Eric C. Stecker, MD, MPH, *Oregon Health & Science University, Portland, OR*

WEDNESDAY

11:20 a.m. Putting it all Together: Case Presentations from the Lab
Pamela K. Mason, MD, *University of Virginia Health System, Charlottesville, VA*

12:00 p.m. Hands-On Educational Session

Session SP03. ALLIED PROFESSIONALS FORUM II: INTRODUCTION TO DEVICE THERAPIES FOR THE NOVICE ALLIED PROFESSIONAL

Allied Professionals

Room 405

8:00 a.m. - 3:30 p.m.

Special Session

ARRT

CME/CE Hours: 3.75

Session Description: This session is designed for the Allied Professional who is relatively new to the field. It covers the basic principles of device function and programming and features an interactive format with the audience response system. Time is provided after the didactic sessions for "hands-on" experience with the devices.

Chairs: Laurie K. Racenet, ANP, CCDS, CEPS, *Alaska Heart Institute, Anchorage, AK*
Heather M. Ross, DNP, ANP-BC, FHRS, CCDS, CEPS, *Arizona Arrhythmia Consultants, Scottsdale, AZ*

8:05 a.m. Pacing and ICD Indications
Rosemary S. Bubien, RN, MSN, FHRS, CCDS, *University of Alabama At Birmingham, Birmingham, AL*

8:35 a.m. Basic Pacing Timing Cycles
Mark W. Sweesy, MD, FHRS, CCDS, CEPS, *Arrhythmia Technologies Institute, Greenville, SC*

9:15 a.m. Making Timing Cycles Work For Your Patient
Mark W. Sweesy, MD, FHRS, CCDS, CEPS, *Arrhythmia Technologies Institute, Greenville, SC*

10:00 a.m. Break

10:15 a.m. Device Diagnostics: What Does the Device Tell You?
Donna Gerity, RN, MN, CCDS, CEPS, *Swedish Heart & Vascular, Seattle, WA*

10:45 a.m. Understanding the Concepts of Arrhythmia Detection in the ICD
Linda K. Ottoboni, RN, MS, CNS, FHRS, CCDS, *Stanford University Hospital, Stanford, CA*

11:20 a.m. Programming ICDs to Reduce Shock
Mark S. Link, MD, FHRS, *Tufts Medical Center, Boston, MA*

12:00 p.m. Hands-On Educational Session

Session SP04. AP FORUM III: INSIGHTS INTO MANAGING COMPLEX ARRHYTHMIA AND DEVICE PATIENTS FOR THE ADVANCED AP

Allied Professionals

Room 401

8:00 a.m. - 4:00 p.m.

Special Session

ARS ARRT

CME/CE Hours: 5.75

Session Description: This session is designed to explore more advanced concepts in the management of patients with arrhythmias. It will include "Hands-on" time with Rhythm Management Devices, Ablation Systems, and EP Recording Systems.

Chairs: Craig Swygman, CVT, FHRS, CEPS, *Providence St. Vincent Hospital, Portland, OR*
Robin A. Leahy, RN, BSN, CCDS, *Sanger Heart and Vascular Institute, Charlotte, NC*

8:05 a.m. Anticoagulation and Devices for Stroke Prevention in 2013
Gerilynn M. Schott, MSN, CRNP, *Hospital The University Pennsylvania, Philadelphia, PA*

8:35 a.m. Special Considerations in Epicardial Ablation of VT: Pre-procedure, Procedural and Post-procedure
Cory M. Tschabrunn, CEPS, *Beth Israel Deaconess Medical Center, Boston, MA*

9:05 a.m. Cardiac Rhythm Devices and the Pediatric Population
Vicki L. Zeigler, RN, PhD, FHRS, CCDS, CEPS, *Texas Woman's University, Denton, TX*

9:35 a.m. Break

10:00 a.m. Genetic Testing: Channelopathies, HOCM, ARVC
David Tester, BS, *Mayo Clinic, Rochester, MN*

10:30 a.m. Current Strategies for Lead Management
Julie B. Shea, MS, RNCS, FHRS, CCDS, *Brigham and Women's Hospital, Boston, MA*

11:00 a.m. MRIs and Devices: When and How?
Roseann Hansford, RN, MPH, *Johns Hopkins, Baltimore, MD*

11:30 a.m. Post-Ablation Follow-up of the Atrial Fibrillation Patient
Salwa Beheiry, RN, BSN, CCRN, *California Pacific Medical Center, San Francisco, CA*

12:00 p.m. Lunch Break

12:30 p.m. Hands-On Educational Session: Rhythm Management Devices, Ablation Systems, and EP Recording

2:00 p.m. Managing Complications in the EP Lab
Joseph B. Hejlik, RN, BSN, *Mayo Clinic, Phoenix, AZ*

HR 2013

- 2:30 p.m.** Syncope: Current Diagnostic and Treatment Strategies
Tracey J. Littlefield, RN, BSN, *Best Doctors, Boston, MA*
- 3:00 p.m.** Use of 12-Lead ECG in the EP Lab
Scott J. Cox, MS, PAC, *Lankenau Medical Center of Main Line Health System, Wynnewood, PA*

BASIC/TRANSLATIONAL SCIENCE FORUM:

8:00 a.m. – 4:00 p.m.

Session SP06. BASIC/TRANSLATIONAL SCIENCE FORUM: HEART RHYTHM SYSTEMS PHYSIOLOGY

Basic/Translational Science

Room 505

8:00 a.m. - 4:00 p.m.

Special Session

CME/CE Hours: 5.25

Designed in partnership with the Cardiac Electrophysiology Society (CES)

Session Description: This one day program comprised of state-of-the-art talks relevant to experimental electrophysiology, mechanisms of heart rhythm disorders and novel therapeutics. This year's forum places particular emphasis on systems physiology approaches to heart rhythm research and therapy.

Session 1: Heart Rhythm Bioinformatics

Chair: Yoram Rudy, PhD, FHRS, *Washington University, St. Louis, MO*

- 8:00 a.m.** EP in the "Cloud": The CardioVascular Research Grid Project
Raimond Winslow, PhD, *The Johns Hopkins University School of Medicine, Baltimore, MD*

- 8:15 a.m.** Patient-specific Models: Computational Pipeline for the Arrhythmia Simulation
Robert Macleod, PhD, *University of Utah, Salt Lake City, UT*

- 8:45 a.m.** Moderated Discussion

Session 2: Cardiac Circadian Rhythm and Arrhythmia

Chair: Marek Malik, MD, PhD, FHRS, *St. Paul's Cardiac Electrophysiology and St. George's - University of London, London, United Kingdom*

- 9:00 a.m.** Autonomic Modulation in the Prevention of Life-threatening Arrhythmias
Peter J. Schwartz, MD, *University of Pavia/ Fondazione IRCCS Policlinico San Matteo, Pavia, Italy*

- 9:15 a.m.** Myocardial Metabolic and Physiological Daily Rhythms
Martin Young, PhD, *University of Alabama at Birmingham, Birmingham, AL*

- 9:30 a.m.** Circadian Transcriptional Regulation in Cardiac Ion Channels and Arrhythmia
Mukesh Jain, MD, *Case Western Reserve University, Cleveland, OH*

- 9:45 a.m.** Moderated Discussion

- 10:00 a.m.** Break

Session 3: Making a Pacemaking and Conduction System

Chair: Michiko Watanabe, PhD, *Case Western Reserve University, Cleveland, OH*

- 10:30 a.m.** Programming and Reprogramming the Conduction System
Vincent M. Christoffels, PhD, *University of Amsterdam, Amsterdam, Netherlands*

- 10:45 a.m.** Notch Signaling in Conduction Cell Specification
Stacey Rentschler, MD, PhD, *Washington University in St. Louis, St. Louis, MO*

- 11:00 a.m.** Gene Regulatory Networks in Conduction System Function and Disease
Ivan Moskowitz, MD, PhD, *University of Chicago, Chicago, IL*

- 11:15 a.m.** Moderated Discussion

Session 4: Oxidative Stress and Arrhythmia: Novel Signaling Pathways

Chair: Bjorn C. Knollman, MD, PhD, *Vanderbilt University Medical Center, Nashville, TN*

- 11:30 a.m.** Oxidized Ryanodine Receptor-mediated Arrhythmias
Kenneth R. Laurita, PhD, *Case Western Reserve University, Cleveland, OH*

- 11:45 a.m.** Is AF an Oxidant Injury?
Barbara Casadei, MD, DPhil, *University of Oxford, Oxford, United Kingdom*

- 12:00 p.m.** The Role of Oxidation in Sudden Death
Min Luo, DO, PhD, *University of Iowa, Iowa City, IA*

- 12:15 p.m.** Moderated Discussion

- 12:30 p.m.** Lunch Break

Session 5: Autonomic Control of Heart Rhythm and Arrhythmia

Chair: Douglas P. Zipes, MD, FHRS, *Krannert Institute of Cardiology, Indianapolis, IN*

- 1:30 p.m.** Molecular Mechanisms of Remodeling of Sympathetic Nerves and Receptors and Arrhythmia
Beth A. Habecker, PhD, *Oregon Health & Science University, Portland, OR*

WEDNESDAY

- 1:45 p.m.** Neural Remodeling and Cardiac Arrhythmia in Animal Models
Peng-Sheng Chen, MD, FHRS, *Indiana University School of Medicine, Indianapolis, IN*
- 2:00 p.m.** Neural Remodeling and Cardiac Arrhythmia in Humans
Kalyanam Shivkumar, MD, PhD, FHRS, *UCLA Cardiac Arrhythmia Center, Los Angeles, CA*
- 2:15 p.m.** Moderated Discussion
- 2:30 p.m.** Break
- 3:00 p.m.** Douglas P. Zipes' Lectureship Award - Rabbit Warren or Beehive: The Mechanisms of Fibrillation and Defibrillation
Raymond E. Ideker, MD, PhD, FHRS, *University of Alabama, Birmingham, AL*

SPECIAL SESSIONS

8:00 a.m. – 3:30 p.m.

Session SP05. HANDS ON EDUCATIONAL SESSION WITH DISCUSSIONS IN THE ROUND

Special Session

Room 201

11:00 a.m. - 3:30 p.m.

Special Session

CME/CE Hours: 0

Session Description: Returning this year, the Hands-On Session with Discussions in the Round at Heart Rhythm 2013 continues to offer a unique and valuable learning opportunity for attendees. Engage in informal discussion with key opinion leaders in electrophysiology and one-on-one demonstrations of the newest technology and equipment, presented by industry experts in a relaxed learning environment.

- Chairs:** Elizabeth A. Ching, RN, FHRS, CCDS, *Cleveland Clinic Foundation, Cleveland, OH*
Lon W. Castle, MD, FHRS, *Cleveland Clinic, Westlake, OH*
- 12:15 p.m.** Expert Roundtable 1 - Ethical Considerations in the Device Clinic
Julie B. Shea, MS, RNCS, FHRS, CCDS, *Brigham and Women's Hospital, Boston, MA*
- 12:40 p.m.** Expert Roundtable 2 - Maximizing Workflow - How to do More with Less
Aileen M. Ferrick, ACNP, FHRS, *New York University School of Medicine, New York, NY*
- 1:05 p.m.** Expert Roundtable 3 - Decoding the Coding Mystery - Are you Coding Appropriately?
Colleen Deighan, *Cleveland Clinic, Cleveland, OH*
- 1:30 p.m.** Expert Roundtable 4 - Setting Up and Running an Efficient and Profitable Device Clinic

Elizabeth A. Ching, RN, FHRS, CCDS, *Cleveland Clinic Foundation, Cleveland, OH*

- 1:55 p.m.** Expert Roundtable 5 - Setting Up a Quality Assurance Program in the EP Lab
Douglas S. Beinborn, MA, BSN, *Mayo Clinic, Rochester, MN*

Session SP17. CARDIAC RESYNCHRONIZATION THERAPY GUIDELINES UPDATE: INTERNATIONAL PERSPECTIVE

Cardiovascular Implantable Electronic Devices & Heart Failure
Room 102

8:00 a.m. - 11:00 a.m.

Special Session

CME/CE Hours: 2.5

Session Description: Several guideline documents related to device-based therapy for the treatment of heart failure have been recently published, including the 2012 ACCF/AHA/HRS, ESC, and HFS Guidelines, as well as the EHRA/HRS expert consensus statement on cardiac resynchronization therapy in heart failure. These documents describe changes in recommendations for CRT therapy based on evidence from recent clinical trials and include recommendations for CRT follow-up. The importance of these guideline changes, as well as an international perspective, will be the focus of this session.

Chairs: Cynthia M. Tracy, MD, *George Washington University - Dept of Cardiology, Washington, DC*
Jean-Claude Daubert, MD, *Centre Cardio-Pneumologique, Rennes, France*

- 8:00 a.m.** CRT and QRS Morphology (LBB vs. Non-LBBB)
Mark S. Link, MD, FHRS, *Tufts Medical Center, Boston, MA*
- 8:15 a.m.** CRT for Patients with Mild (Class I or II) Heart Failure
Lynne W. Stevenson, MD, *Brigham and Women's Hospital, Boston, MA*
- 8:45 a.m.** CRT and Atrial Fibrillation
Derek V. Exner, MD, MPH, FHRS, *Libin Cardiovascular Institute of Alberta, Calgary, AB, Canada*
- 9:00 a.m.** Break
- 9:30 a.m.** CRT and Anticipated Frequent (>40%) Ventricular Pacing
Pamela E. Karasik, MD, FHRS, *Veteran's Administration Medical Center: Cardiology, Chevy Chase, DC*
- 9:45 a.m.** CIED In-Person or Remote Monitoring Follow-up Recommendations
Amit J. Shanker, MD, FHRS, *Bassett Healthcare of the New York Presbyterian Health System, Cooperstown, NY*
- 10:00 a.m.** Gaps in Evidence

HR 2013

Bruce L. Wilkoff, MD, FHRS, CCDS, *Cleveland Clinic, Cleveland, OH*

- 10:15 a.m.** Implications for Performance Measurement and the Registries
N. A. Mark Estes, MD, FHRS, CCDS, *Tufts Medical Center, Boston, MA*

- 10:30 a.m.** Q & A

MINI-COURSES

8:00 a.m. – 3:30 p.m.

Session MC01. THE FUTURE OF PACING AND DEFIBRILLATION: PROMISES AND CHALLENGES

Cardiovascular Implantable Electronic Devices & Heart Failure
Mile High Room 1A 8:00 a.m. - 11:00 a.m.
Mini-Course FIT
CME/CE Hours: 3

Session Description: This session explores the future of CIEDs

- Chairs:** Mark H. Schoenfeld, MD, FHRS, CCDS, *Yale University School of Medicine, New Haven, CT*
Andrew D. Krahn, MD, FHRS, *Gordon & Leslie Diamond Health Care Centre, Vancouver, BC, Canada*
- 8:00 a.m.** Leadless Pacing
Kathy L. Lee, MBBS, *Queen Mary Hospital, Hong Kong, Hong Kong*
- 8:30 a.m.** Remote Programming of CIEDs
George H. Crossley, MD, FHRS, CCDS, *St. Thomas Research Institute and University of Tennessee College of Medicine, Nashville, TN*
- 9:00 a.m.** The Totally Subcutaneous ICD
Dominic A. Theuns, PhD, *Erasmus MC, Rotterdam, Netherlands*
- 9:30 a.m.** Break
- 10:00 a.m.** The Transvenous ICD of the Future
Robert G. Hauser, MD, FHRS, CCDS, *Minneapolis Heart Institute, Minneapolis, MN*
- 10:30 a.m.** Biologic Therapies: Can Genes and Cells Replace Devices?
Michael R. Rosen, MD, FHRS, *Columbia University, New York, NY*

Session MC02. ICD IMPLANT COMPLICATIONS AND REDUCING RISK

Cardiovascular Implantable Electronic Devices & Heart Failure
Mile High Room 1D 8:00 a.m. - 11:00 a.m.
Mini-Course FIT
CME/CE Hours: 3

Session Description: This session will discuss complications related to ICD implantation, including ways to reduce risk and measure performance.

- Chairs:** Stephen Vlay, MD, FHRS, CCDS, *Stony Brook University, Stony Brook, NY*
Rupa Bala, MD, *University of Pennsylvania, Philadelphia, PA*
- 8:00 a.m.** How to Avoid Complications During Initial ICD Implantation or Generator Replacement
Marye J. Gleva, MD, FHRS, *Washington University School of Medicine, Saint Louis, MO*
- 8:25 a.m.** Implantation Risks and Device Type: Comparison of Single Versus Dual Chamber Devices
Paul D. Varosy, MD, FHRS, *Denver VAMC - University of Colorado, Denver, CO*
- 8:50 a.m.** Risks of Defibrillation Testing: Is it Worth It?
Jeanne E. Poole, MD, FHRS, CCDS, *University of Washington, Seattle, WA*
- 9:15 a.m.** Break
- 9:45 a.m.** The Role of the ICD Registry In Measuring Performance
Sana M. Al-Khatib, MD, MHS, FHRS, CCDS, *Duke Clinical Research Institute, Durham, NC*
- 10:05 a.m.** ULV Testing: What is the Science? What Does it Measure? Does it Reduce Risks?
Peng-Sheng Chen, MD, FHRS, *Indiana University School of Medicine, Indianapolis, IN*
- 10:30 a.m.** Management of the Patient with a High DFT
Henry H. Hsia, MD, FHRS, *San Francisco VA Med Center-UCSF, San Francisco, CA*

Session MC03. OCCUPATIONAL RISK IN THE EP LAB

Clinical Electrophysiology & Catheter Ablation
Mile High Room 4A 8:00 a.m. - 11:00 a.m.
Mini-Course FIT PM
CME/CE Hours: 3

Session Description: This session focuses on understanding the risks of radiation for EP professionals and patients and developing behavioral and technological disciplines as well as non fluoroscopic imaging to minimize radiation exposure.

- Chairs:** Christopher R. Cole, MD, FHRS, *Colorado Springs Cardiology, Colorado Springs, CO*
Samir Saba, MD, FHRS, *University of Pittsburgh, Pittsburgh, PA*

WEDNESDAY

- 8:00 a.m.** Overview of Radiation Risks to Patients and Physicians
Przemyslaw P. Borek, MD, *Cleveland Clinic, Cleveland, OH*
- 8:30 a.m.** Developing the right Radiation Etiquette in the EP Lab
Daniel H. Cooper, MD, *Washington University St. Louis, St. Louis, MO*
- 9:00 a.m.** Newer Systems to Reduce Fluoroscopy
Philipp Sommer, MD, FHRs, *Heart Center, Leipzig, Germany*
- 9:30 a.m.** Break
- 10:00 a.m.** Using Electroanatomic Mapping Tools to Minimize Fluoroscopy
Mohamed Kanj, MD, *Cleveland Clinic, Cleveland, OH*
- 10:30 a.m.** Ergonomics: Minimizing Strain on the Physician
Frank Cuoco Jr., MD, FHRs, *MUSC, Charleston, SC*

Session MC04. GENOMICS OF COMPLEX ARRHYTHMIAS: WHERE ARE WE IN 2013

Clinical Electrophysiology & Catheter Ablation
Mile High Room 4D 8:00 a.m. - 11:00 a.m.
Mini-Course
CME/CE Hours: 3

Session Description: Experts in the field will review recent advances in genome wide association studies, exome sequencing studies, and functional genomics as they relate to common arrhythmic disorders. The potential future therapeutic applications of these discoveries will also be discussed.

- Chairs:** Patrick T. Ellinor, MD, PhD, *Massachusetts General Hospital, Boston, MA*
Christine M. Albert, MD, *Brigham and Women's Hospital, Boston, MA*
- 8:00 a.m.** Genomics of Atrial Fibrillation.
Stefan Kaab, MD, PhD, *LMU Munich Klinikum Grosshadern, Munich, Germany*
- 8:25 a.m.** Genomic Studies of the Electrocardiogram: New Insights into Arrhythmia Mechanisms
Christopher Newton-Cheh, MD, MPH, *Harvard Medical School, Boston, MA*
- 8:50 a.m.** Genomics of Ventricular Fibrillation and Sudden Cardiac Death
Connie R. Bezzina, PhD, *Academic Medical Center, Amsterdam, Netherlands*
- 9:15 a.m.** Break
- 9:45 a.m.** Next-generation Association Studies for Complex Traits
TBD

- 10:05 a.m.** Next Generation Functional Assays: Potential Utility in Complex Syndromes
Alfred L. George Jr, MD, *Vanderbilt University, Nashville, TN*
- 10:30 a.m.** Future Directions and Clinical Applications
Dan M. Roden, MD, FHRs, *Vanderbilt University School of Medicine, Nashville, TN*

Session MC05. CATHETER ABLATION OF ACCESSORY PATHWAYS: FACING THE CHALLENGES

Clinical Electrophysiology & Catheter Ablation
Mile High Room 4F 8:00 a.m. - 11:00 a.m.
Mini-Course FIT
CME/CE Hours: 3

Supported by an unrestricted educational grant provided by Biosense Webster, Inc., a Johnson & Johnson company.

Session Description: An in-depth discussion will be presented on how to approach complex signals when mapping accessory pathways in difficult situations (unusual anatomic locations, previous ablation, and in the setting of congenital heart disease). Less commonly encountered variants of WPW syndrome will be discussed and distinguished from each other. Finally, a critical appraisal of techniques to avoid complications when ablating pathways particularly in the vicinity of the AV conduction system and with coronary artery proximity is presented.

- Chairs:** Prashanthan Sanders, MBBS, PhD, FHRs, *University of Adelaide and Royal Adelaide Hospital, Adelaide, Australia*
Jeffrey E. Olgin, MD, FHRs, *University of California San Francisco - Cardiac Electrophysiology, San Francisco, CA*

- 8:00 a.m.** Accessory Pathways Potentials and Slanting Pathways: Where to Ablate?
Shoei K. Stephen. Huang, MD, FHRs, CCDS, *Scott & White Healthcare at Texas A & M University Health Science Center, Temple, TX*
- 8:25 a.m.** Recognition, Mapping and Ablation of Mahaim Fibers and Nodo-ventricular Pathways
Nitish Badhwar, MBBS, FHRs, CCDS, *University of California San Francisco, San Francisco, CA*
- 8:50 a.m.** Epicardial Pathways: Approach to Mapping and Ablation
Nadir Saoudi, MD, FHRs, *Centre Hospitalier Princesse Grace, Monaco, Monaco*
- 9:15 a.m.** Break
- 9:45 a.m.** Para-hisian and Aortic Cusp Pathways: Approach to Mapping and Ablation
Sabine Ernst, MD, *Royal Brompton Hospital, London, United Kingdom*
- 10:05 a.m.** Difficult Pathway Ablations: PJRT and in Association with Congenital Heart Disease

Maully J. Shah, MBBS, FHRS, *Children's Hospital of Philadelphia, Philadelphia, PA*

- 10:30 a.m.** Avoiding Complications when Ablating Pathways in Unusual Locations
Hiroshi Nakagawa, MD, PhD, *University of Oklahoma Health Sciences Center - Heart Rhythm Institute, Oklahoma City, OK*

Session MC06. RISK STRATIFICATION AND PREVENTION OF SUDDEN DEATH IN CONGENITAL HEART DISEASE

Pediatric/Adult Congenital Heart Disease

Room 108 8:00 a.m. - 11:00 a.m.
Mini-Course FIT
CME/CE Hours: 3

Session Description: In this minicourse, the assessment of risk of sudden death and its management in congenital heart patients will be explored and discussed from several perspectives.

- Chairs:** Volkan Tuzcu, MD, *Istanbul Medipol University Hospital, Little Rock, Turkey*
Barbara J. Deal, MD, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL
- 8:05 a.m.** Development and Application of Risk Models in Congenital Heart Disease Patients
Paul Khairy, MD, PhD, *Montreal Heart Institute, Montreal, QC, Canada*
- 8:25 a.m.** Natural History of Malignant Arrhythmias in Congenital Heart Disease
Shubhayan Sanatani, MD, FHRS, CCDS, *Children's Heart Centre, Vancouver, BC, Canada*
- 8:45 a.m.** Risks Management in Congenital Heart Patients with Atrial Arrhythmias
Louise Harris, MBCHB, FHRS, *Toronto General Hospital, Toronto, ON, Canada*
- 9:05 a.m.** Break
- 9:35 a.m.** Management of Recurrent Arrhythmia in Congenital Patients with End-stage Heart Disease
Mark E. Alexander, MD, FHRS, *Children's Hospital - Cardiology, Boston, MA*
- 9:55 a.m.** Ventricular Function and Risk of Sudden Death in Congenital Heart Disease
Mohammad Munawar, MD, PhD, *Binawaluya Cardiovascular Center, Jakarta, 13650, Indonesia*
- 10:15 a.m.** Appropriate Utilization and Techniques for Implantation of ICDs in Congenital Heart Patients
Andrew E. Radbill, MD, *Vanderbilt University, Nashville, TN*
- 10:35 a.m.** Ablative Management of Atrial Tachycardias in Adults with Congenital Heart Disease
Natasja De Groot, MD, PhD, *Erasmus University Center, Leiden, Netherlands*

Session MC07. INDICATIONS FOR ICD THERAPY: GAPS IN THE GUIDELINES

Cardiovascular Implantable Electronic Devices & Heart Failure
Mile High Room 1A 1:00 p.m. - 3:30 p.m.
Mini-Course FIT
CME/CE Hours: 2.25

Session Description: This session will explore areas of controversy and gaps in the guidelines related to the benefits of primary prevention ICDs early post-MI or following revascularization, in elderly patients, or in the setting of chronic kidney disease. In addition, gaps in knowledge related to generator replacement in patients with primary prevention ICDs and improved LV function will be discussed.

- Chairs:** Bruce D. Lindsay, MD, FHRS, CCDS, *Cleveland Clinic Foundation, Cleveland, OH*
Yong-Mei Cha, MD, FHRS, *Mayo Clinic, Rochester, MN*
- 1:00 p.m.** Do ICDs Benefit Patients With Chronic Kidney Disease?
Mina K. Chung, MD, FHRS, *Cleveland Clinic, Cleveland, OH*
- 1:20 p.m.** ICD Implantation Following Revascularization: Is "Early" Ever Appropriate?
Andrea M. Russo, MD, FHRS, *Cooper University Hospital, Camden, NJ*
- 1:40 p.m.** Should ICDs Be Implanted Early Post-MI?
Mark S. Kremers, MD, FHRS, CCDS, *MidCarolina Cardiology, Charlotte, NC*
- 2:00 p.m.** Break
- 2:15 p.m.** ICDs in Octogenarians: Do They Benefit?
Jodie L. Hurwitz, MD, FHRS, *North Texas Heart Center, Dallas, TX*
- 2:35 p.m.** Who Should Get a Dual Chamber (As Opposed to Single Chamber) ICD?
Paul A. Friedman, MD, FHRS, *Mayo Clinic, Rochester, MN*
- 2:55 p.m.** Should Any Patients With LVEF>35% Receive CRT?
Theofanie Mela, MD, *Massachusetts General Hospital, Boston, MA*
- 3:15 p.m.** Should Patients With Primary Prevention ICDs and Improved LV Function Undergo Generator Replacement?
Alfred E. Buxton, MD, *Beth Israel Deaconess Medical Center, Boston, MA*

WEDNESDAY

Session MC08. SAFETY OF SPORTS FOR PATIENTS WITH ARRHYTHMOGENIC CONDITIONS

Cardiovascular Implantable Electronic Devices & Heart Failure
Mile High Room 1D 1:00 p.m. - 3:30 p.m.
Mini-Course FIT
CME/CE Hours: 2.25

Session Description: The session will discuss the safety or risks of sports in patients with hypertrophic cardiomyopathy, RV dysplasia/cardiomyopathy, and Long QT Syndrome.

Chairs: Brian Olshansky, MD, FHRS, CCDS, *University of Iowa Hospital and Clinics, Iowa City, IA*
David S. Cannom, MD, FHRS, *Good Samaritan Hospital, Los Angeles, CA*

1:00 p.m. Risk of Sports-Related Sudden Cardiac Death In Patients with Hypertrophic Cardiomyopathy
Sharlene Day, MD, *University of Michigan, Ann Arbor, MI*

1:30 p.m. Safety of Sports in Patients with ICDs
Rachel Lampert, MD, FHRS, *Yale University School of Medicine, New Haven, CT*

2:00 p.m. Break

2:15 p.m. Should Patients with Long QT Syndrome Participate In Sports?
Silvia G. Priori, MD, PhD, *Fondazione Salvatore Maugeri University of Pavia, Pavia, Italy*

2:45 p.m. Risk of Sports In Patients with RV Dysplasia/RV Cardiomyopathy
Hein Heidbuchel Prof., MD, PhD, *University Hospital Gasthuisberg, University of Leuven, Leuven, Belgium*

3:15 p.m. Panel Discussion

Session MC09. SYNCOPE: MAKING THAT DIFFICULT DIAGNOSIS

Clinical Electrophysiology & Catheter Ablation
Mile High Room 4A 1:00 p.m. - 3:30 p.m.
Mini-Course FIT
CME/CE Hours: 2

Session Description: This session will explore the approach to the difficult and high-risk syncope patient

Chairs: Stanley Tung, MD, -null-, *Vancouver, BC, Canada*
S. Adam Strickberger, MD, *Washington Hospital Center, Washington, DC*

1:00 p.m. Initial Assessment of the Unexplained Syncope Referral
Nick Gall, MD, *King's College Hospital, London, United Kingdom*

1:20 p.m. Monitoring Strategies in Difficult Syncope Patients

Alexis Mechulan, MD, *Hôpital La Timone, Marseille, France*

1:40 p.m. Syncope and Mild Heart Disease: When to Worry
Matthew T. Bennett, MD, *University of British Columbia, Vancouver, BC, Canada*

2:00 p.m. Break

2:30 p.m. The Role of EP Testing and Pharmacologic Provocation
Michele Brignole, MD, *Ospedali del Tigullio, Lavagna, Italy*

3:10 p.m. ICD Therapy in Patients with Syncope: Patient Selection
Domenico Corrado, MD, PhD, *University of Padova, Padova, Italy*

Session MC10. APPROACHES FOR AUTONOMIC MODULATION TO TREAT REFRACTORY ARRHYTHMIA

Clinical Electrophysiology & Catheter Ablation
Mile High Room 4D 1:00 p.m. - 3:30 p.m.
Mini-Course FIT
CME/CE Hours: 2

Session Description: The autonomic basis for cardiac arrhythmias has been a subject of study for several decades. In this session, recent advances in applying primary autonomic modulatory techniques to treat atrial fibrillation, as well as ventricular arrhythmia, are discussed. Participants will develop an understanding of recognizing which patients with recalcitrant arrhythmias may benefit from surgical or ablative approaches that target the autonomic nervous system.

Chairs: Michael J. Ackerman, MD, PhD, *Mayo Clinic, Rochester, MN*
Ralph Lazzara, MD, FHRS, *Heart Rhythm Institute at the University of Oklahoma Health Sciences Center, Oklahoma City, OK*

1:00 p.m. Techniques for Sympathectomy: Surgical and Minimally Invasive
Christopher Moir, MD, *Mayo Clinic Rochester, Rochester, MN*

1:30 p.m. Novel Approaches for Autonomic Modulation for Arrhythmia Management: Inherited Syndromes
Future of Autonomic Therapy for Arrhythmia
Michael J. Ackerman, MD, PhD, *Mayo Clinic, Rochester, MN*

2:00 p.m. Break

2:30 p.m. Future of Autonomic Therapy for AF and VT
Suraj Kapa, MD, *University of Pennsylvania, Philadelphia, PA*

3:00 p.m. Future of Autonomic: Therapy For Syncope and Inappropriate Sinus Tachycardia
Win Shen, MD, FHRS, *Mayo Clinic, Phoenix, AZ*

HR 2013

Session MC11. SUDDEN CARDIAC ARREST (SCA): STATE OF THE ART 2013

Clinical Electrophysiology & Catheter Ablation

Mile High Room 4F 1:00 p.m. - 3:30 p.m.

Mini-Course

CME/CE Hours: 2.25

Session Description: This session will evaluate the present techniques to increase awareness and improve outcomes for sudden cardiac arrest.

Chairs: Mark S. Link, MD, FHRS, Tufts Medical Center, Boston, MA
Sumeet S. Chugh, MD, FHRS, Cedars-Sinai Medical Center, Los Angeles, CA

1:00 p.m. Sudden Cardiac Arrest and Resuscitation: Epidemiology in 2013
Christine M. Albert, MD, Brigham and Women's Hospital, Boston, MA

1:20 p.m. Genomics of Sudden Cardiac Death
Christopher Newton-Cheh, MD, MPH, Harvard Medical School, Boston, MA

1:40 p.m. Sudden Cardiac Death not due to Ventricular Arrhythmias
Myron Weisfeldt, MD, Johns Hopkins University - Dept. of Medicine, Baltimore, MD

2:00 p.m. Break

2:15 p.m. Screening for Sudden Cardiac Death
Jonathan R. Kaltman, MD, National Heart Lung & Blood Institute, Bethesda, MD

2:35 p.m. Public Access to Defibrillation
Jose Joglar, MD, FHRS, University of Texas Southwestern Medical Center, Dallas, TX

2:55 p.m. State of the Art ACLS 2013 and into the Future
Gopi Dandamudi, MD, FHRS, Geisinger Heart Institute, Wilkes-Barre, PA

3:15 p.m. Treatment of the Cardiac Arrest Survivor: Maximizing survival after Resuscitation
Zian H. Tseng, MD, University California San Francisco, San Francisco, CA

Session MC12. BACK TO FUTURE - THE TRAJECTORY OF SCIENCE AND TECHNOLOGY IN PEDIATRIC EP

Pediatric/Adult Congenital Heart Disease

Room 102 1:00 p.m. - 3:30 p.m.

Mini-Course

FIT

CME/CE Hours: 2.25

Session Description: In this minicourse, three pairs of talks will be given on major topical areas in pediatric and congenital electrophysiology. Each pair of talks will outline the historical background of the topic, and project the future development of the field in technology and practice.

Chairs: Robert M. Hamilton, MD, MHSc, Hospital for Sick Children, Toronto, ON, Canada
Prince J. Kannankeril, MD, MSCI, Vanderbilt University Medical Center, Nashville, TN

1:00 p.m. The Development of Catheter Ablation as a Technique in Children with SVT
George F. Van Hare, MD, FHRS, CCDS, Washington University, Saint Louis, MO

1:20 p.m. Ablation of SVT in Children: Where do we go From Here?
Andreas Pflaumer, MD, Royal Children's Hospital Melbourne, Parkville VIC, Australia

1:40 p.m. The History of ICD use in Pediatric and Congenital Populations
Michael J. Silka, MD, Children's Hospital Los Angeles, Los Angeles, CA

2:00 p.m. Break

2:15 p.m. ICDs in the Next Generation of Pediatric Patients
Charles I. Berul, MD, FHRS, CCDS, Children's National Medical Center, Washington, DC

2:35 p.m. Diagnosis and Therapy of LQTS in the Pre-genetic Era
Jane E. Crosson, MD, Johns Hopkins Bloomberg Children's Center, Baltimore, MD

2:55 p.m. The Future of Genomic Medicine in LQTS Management
Martin Tristani-Firouzi, MD, University of Utah, Salt Lake City, UT

3:15 p.m. Panel Discussion

Session MC13. DIAGNOSIS AND MANAGEMENT OF FETAL ARRHYTHMIAS

Pediatric/Adult Congenital Heart Disease

Room 108

1:00 p.m. - 3:30 p.m.

Mini-Course

FIT PM

CME/CE Hours: 2.25

Session Description: This session will explore issues in fetal electrophysiology, including diagnostic and management techniques.

Chairs: Anne Fournier, MD, Ste Justine Hospital, Montreal, QC, Canada
Eric Rosenthal, MD, Evelina Children's Hospital, London, United Kingdom

1:00 p.m. New Technologies in Diagnosis and Management of Fetal Arrhythmias
Janette F. Strasburger, MD, Children's Hospital of Wisconsin-Milwaukee, Milwaukee, WI

1:25 p.m. Fetal Evaluation in Inherited Arrhythmia Syndromes
Bettina F. Cuneo, MD, The Heart Institute for Children, Chicago, IL

WEDNESDAY

1:50 p.m. Echocardiographic Diagnosis of Fetal Arrhythmia
Mark Friedberg, MD, *Hospital for Sick Children,*
Toronto, ON, Canada

2:15 p.m. Break

2:30 p.m. Pharmacologic Management of Fetal
Tachyarrhythmias
Orhan Uzun, MD, *University Hospital of Wales,*
Cardiff, Wales, United Kingdom

3:00 p.m. Fetal Diagnosis of Complete Heart Block:
Prognosis and Management
Edgar T. Jaeggi, MD, *The Hospital for Sick*
Children, Toronto, ON, Canada

Session SP07. OPENING PLENARY

Special Session

Bellco Theatre

5:00 p.m. - 6:00 p.m.

Special Session

CME/CE Hours: 0

Session Description: The Heart Rhythm Society presents
President Bill Clinton for the keynote address at the Opening
Plenary Session at Heart Rhythm 2013.

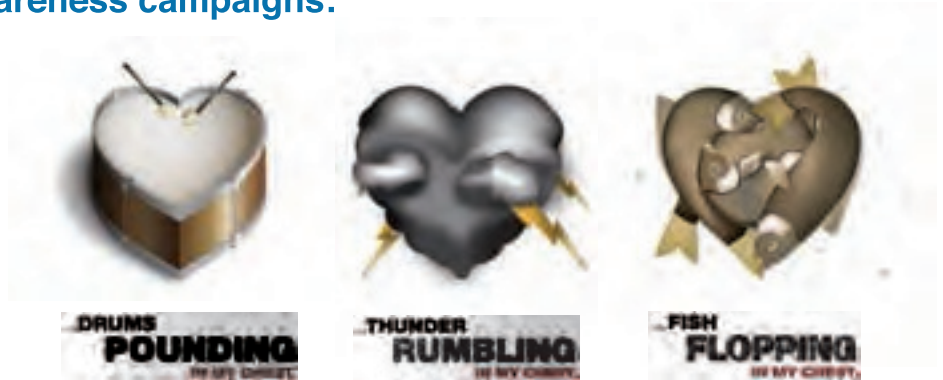
The Heart Rhythm Society increases public knowledge of heart rhythm disorders and treatment through its year-long awareness campaigns:

Atrial Fibrillation (AFib)

The “AFib Feels Like” Awareness Campaign increases public knowledge of AFib, its symptoms, warning signs, and available treatment options.

www.AFib.org

Sponsors: Boehringer-Ingelheim, Janssen Pharmaceuticals, St. Jude Medical



Sudden Cardiac Arrest (SCA)

The Society’s award-winning “Apples and Oranges” Awareness Campaign uses a simple analogy to educate people about the difference between a heart attack and SCA. The campaign targets heart attack survivors, who are at the highest risk for SCA.

www.StopSCA.org

Sponsors: Boston Scientific



Arrest the Risk

“Arrest the Risk” is the Society’s newest awareness campaign. Launched in the U.S. in partnership with the Association of Black Cardiologists, this campaign aims to overcome the barriers to proper diagnosis and treatment of SCA, particularly in the African American community. Emmy Award-winning journalist Shaun Robinson is lending her voice and support to the campaign.

www.ArrestTheRisk.org

Sponsor: Medtronic



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