

State-of-the-Art ECHOCARDIOGRAPHY

31st ANNUAL



FINAL PROGRAM

February 17–20, 2018

Optional Learning Lab

February 16–17, 2018

**Paradise Point Resort & Spa
San Diego, CA**

Course and Learning Lab Director

Bijoy K. Khandheria, MD, FASE
Past President, ASE
Aurora Health Care
Milwaukee, WI

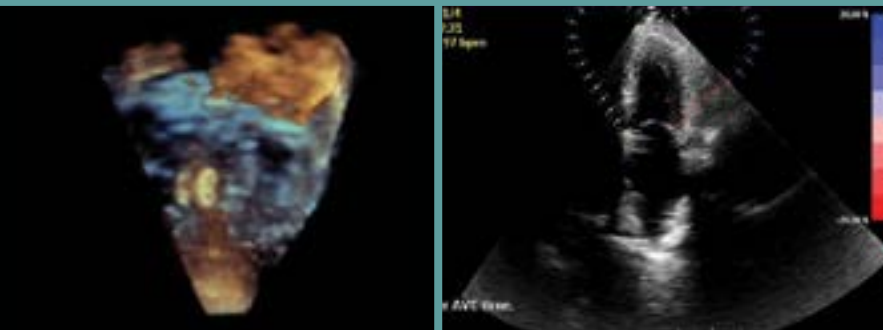
Course Co-Director

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Past President, ASE
Houston Methodist Hospital
Houston, TX

Learning Lab Co-Director

Roberto M. Lang, MD, FASE
Past President, ASE
University of Chicago Medical Center
Chicago, IL

**Case-based Approach to Clinical Echocardiography
Incorporate New Guidelines into Clinical Practice**



Welcome Message

Welcome to the 31st Annual State-of-the-Art Echocardiography conference, a premier program organized by the American Society of Echocardiography.

We listened to you. The program reflects your suggestions. Lots of cases to feast upon.

In keeping with past tradition, we continue to have first-rate cardiologists and sonographers presenting a broad range of echo-related topics to enhance your clinical practice. Upon completion of this course you should have a “state-of-the-art” knowledge of clinical echocardiography including 3D and myocardial or strain imaging and their practical applications.

A new destination awaits us all, San Diego, California. Blue skies, clear water, and first class education.

Welcome to San Diego and the 31st Annual State-of-the-Art Echocardiography conference.



Bijoy K. Khandheria, MD, FASE

*Course and Learning Lab Director
Past President, ASE
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Milwaukee, WI*



Faculty

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Matt M. Umland, ACS, RDCS, FASE

Aurora Health Care
Milwaukee, WI

Sarah M. Roemer, BS, RDCS

Aurora Health Care
Milwaukee, WI

Overview of State-of-the-Art Echocardiography

This premier educational program from the American Society of Echocardiography is its 31st year and follows the themes of structural heart disease, myocardial and pericardial disease, coronary artery disease, and interventional echocardiography. During the course over 100 cases will be presented by the expert faculty to highlight what echo brings to each theme, help clinicians recognize and avoid common errors and pitfalls, and how to apply the guidelines in a practical manner. Workshops on TAVR and TMVR, the two emerging therapeutic approaches for valvular heart disease, will be a highlight of this course.

The faculty consists of recognized leaders in the field of echocardiography acclaimed for their teaching abilities. Participants will have the opportunity to interact with the faculty one-on-one in the Computer-Based Learning Lab featuring advanced hemodynamics, 3D, and myocardial strain imaging including plenty of case studies to practice. Live imaging demonstrations will focus on acquisition techniques for 3D and myocardial strain imaging.

Target Audience

State-of-the-Art Echocardiography's program is designed for adult and pediatric cardiologists, cardiovascular surgeons, anesthesiologists, radiologists, nurses, sonographers, and fellows in training. Participants should have a practical knowledge of echocardiography.

Learning Objectives

Upon completion of this course, participants will be better able to:

- Incorporate state-of-the-art clinical applications of echocardiography and Doppler ultrasound into clinical decision-making
- Utilize echocardiography in valvular heart disease
- Evaluate patients prior to, during, and following various structural heart disease procedures such as TAVR, mitral clip, and left atrial appendage closure
- Perform a 3D acquisition and measurement of biventricular size and function; and have a better understanding of the "knobology"
- Explain the new diastolic function guidelines
- Assess left ventricular function with state-of-the-art echocardiographic technology including strain imaging

TAVR and TMVR Workshop

A transcatheter aortic and mitral valve replacement workshop on Saturday afternoon offers an in-depth exploration of the use of echocardiographic imaging in valve disease. As patients become more familiar with valve disease and intervention and more centers are performing these complicated procedures, it is important for practitioners to become more comfortable with diagnosis, intervention, and monitoring.

Learning Lab Session

(Additional Fee Required. Please visit the ASE registration desk to check availability.)

A learning lab will be offered for a full day on Friday, February 16 and a half day on Saturday, February 17, 2018. Separate registration is required and this session is included in the total hours of educational content offered at the course.

Limited to 80 registrants, this intimate workshop allows easy access to faculty members. Individual computer workstations are provided to teach each participant how to quantitate fundamental aspects of clinical echocardiography. The small group environment allows the opportunity for nearly private instruction from top practitioners in the field.

Disclaimer

The information provided during this CME activity is for continuing education purposes only and is not meant to substitute for the independent medical judgment of a healthcare provider relative to diagnostic and treatment options of a specific patient's condition.

Accreditation and Designation

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Society of Echocardiography and the American Society of Echocardiography Education and Research Foundation. The American Society of Echocardiography is accredited by the ACCME to provide continuing medical education for physicians.

The American Society of Echocardiography is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The American Society of Echocardiography designates this live activity (the learning lab and the main session) for a maximum of **33.5 AMA PRA Category 1 Credits™**. The main session has been designated for a maximum of **21.75 AMA PRA Category 1 Credits™**.

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

Successful completion of this CME activity enables the participant to earn up to **33.5 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program and/or The American Board of Anesthesiology® (ABA) Maintenance of Certification in Anesthesiology Program® or MOCA®**. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is ASE's responsibility to submit participant completion information to ACCME for the purpose of granting ABA MOCA and/or ABIM MOC points.



Maintenance of Certification in Anesthesiology Program® and MOCA® are registered certification marks of the American Board of Anesthesiology®. MOCA 2.0® is a trademark of the American Board of Anesthesiology®.

Daily breakdown of CME credits:

Friday, February 16, 2018:

Learning Lab = 7.5 hours

Saturday, February 17, 2018:

Learning Lab = 4.25 hours

Main Session = 3.75 hours

Sunday, February 18, 2018 = 8 hours

Monday, February 19, 2018 = 7.5 hours

Tuesday, February 20, 2018 = 2.5 hours

The ACCME and the European Board of Accreditation in Cardiology (EBAC) recognize each other's accreditation systems as substantially equivalent. To obtain EBAC credit for participation in this activity, submit evidence of participation directly to EBAC (www.ebac-cme.org).

The European Union of Medical Specialists (UEMS)-European Accreditation Council for Continuing Medical Education (EACCME) has an agreement of mutual recognition of continuing medical education (CME) credit with the American Medical Association (AMA). European physicians interested in converting AMA PRA Category 1 Credit™ into European CME credit (ECMEC) should contact the UEMS (www.uems.eu).

ARDMS, CCI, and Sonography Canada recognize ASE's certificates and have agreed to honor the credit hours toward their registry requirements for sonographers.

All or a portion of this educational activity may meet the CME requirement for IAC Echocardiography accreditation.

This activity is eligible for Section 1 credits in the Royal College of Physicians and Surgeons of Canada's Maintenance of Certification (MOC) Program. Participants must log into MAINPORT to claim this activity.

Disclosure

ASE is committed to ensuring that its educational mission and all educational programs are not influenced by the special interests of any corporation or individual, and its mandate is to retain only those speakers whose financial interests can be effectively resolved to maintain the goals and educational integrity of the program. While a monetary or professional affiliation with a corporation does not necessarily influence a speaker's presentation, the Essential Areas and Policies of the ACCME require that any relationships that could possibly conflict with the educational value of the program be resolved prior to the educational session and disclosed to the audience. In accordance with these policies, ASE implemented mechanisms prior to the planning and implementation of this CME activity to identify and resolve conflicts of interest for all individuals in a position to control content. Disclosure information is referenced and can be found beginning on page 11 of this program.

Commercial Support Disclosure Statement

Educational Grants: This activity is supported in part by unrestricted educational grants from Abbott, GE Healthcare, Lantheus Medical Imaging, Inc., and Medtronic.

In-Kind Donations: This activity is supported in part by in-kind donations from GE Healthcare, Hitachi Healthcare, Philips, Epsilon Imaging, Inc., FUJIFILM Medical Systems U.S.A., Inc., and Siemens Healthineers.

How to Obtain CME

To claim your CME for State-of-the-Art Echocardiography, please follow the steps below using your Mozilla Firefox, Google Chrome or Safari browser. Internet Explorer will not work. The deadline to claim credit is **March 20, 2018**.

ASE Members:

1. Go to ASEcho.org and log in to the Member Portal with your username (email) and password.
 - a. If you forget your password, simply click "Retrieve" under the login.
2. Click on ASEUniversity. This will take you directly to your ASEUniversity account.

Nonmembers:

1. Go to ASEUniversity.org.
2. Log into your existing account or create a new one.

To Claim Credit:

3. On the ASEUniversity homepage, click My Account at the top right of the page.
4. Under My Account, click Add Access Code on the left sidebar and enter the code, "31stSOTA"
5. Verify your registration information. Please be sure to use the same information that you used to register for the event.
6. Once verified, click CE Information tab and Take Exam button to claim your CME credit. CME credits are not earned until the entire evaluation has been completed.
7. Your certificate will be available for immediate download and can also be found under My Account in the My Transcripts.

Remember to enter your ABIM and/or ABA number and birthdate if you choose to have MOC and/or MOCA points for this meeting submitted to ABIM and/or ABA. There is a space for this information on the first page of the evaluation.

Attendee Information & Regulations

Registration Location and Hours

Attendee registration is located outside of the Paradise Ballroom.

Friday, February 16, 2018 7:00 AM – 5:00 PM

Saturday, February 17, 2018 7:00 AM – 5:45 PM

Sunday, February 18, 2018, through Tuesday, February 20, 2018, the registration desk will be open during all session hours.

Food Functions

ASE will provide breakfast and coffee breaks for registered attendees in the Turquoise Ballroom.

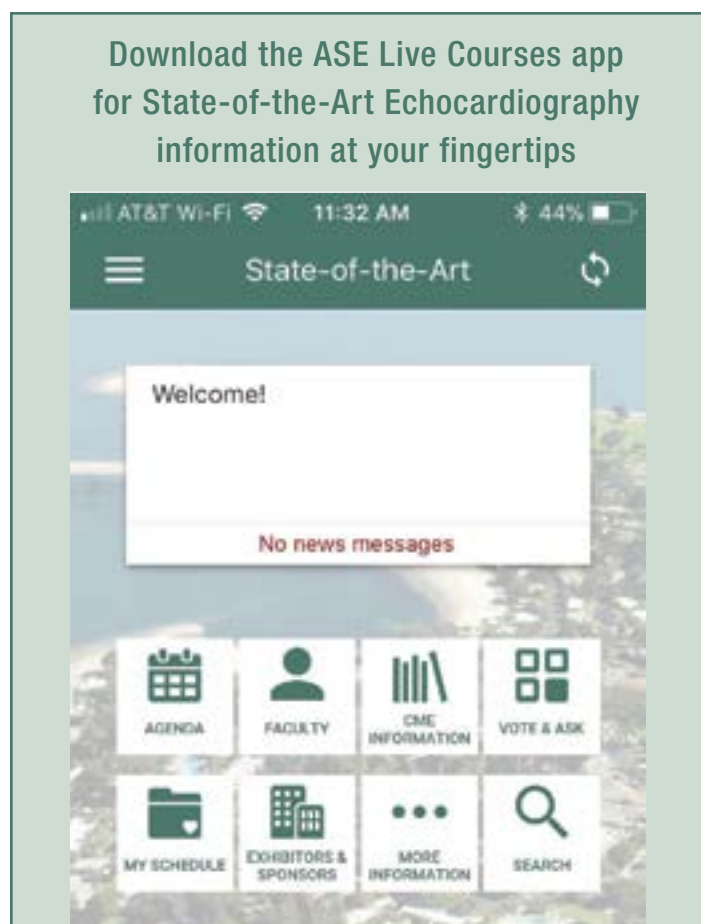
Lunch will be provided for registered attendees of the main conference on Saturday, February 17 – Monday, February 19. Lunch times vary. Please refer to the program schedule for times.

Please join us for a networking reception on Monday evening, February 19 from 5:30 – 6:30 PM.

Refer to the program schedule for the times of the daily coffee breaks. The Paradise Point Resort & Spa offers their guests a variety of dining options. Please see Location Information (page 6) for more details.

Mobile Device Use

We encourage you to use your mobile device to download the new ASE Courses app. After you have downloaded the app, you will have access to the entire meeting program at your fingertips. You can also use the app to ask questions during the sessions you attend. Please remember to turn your mobile device to silent or vibrate mode. Search “ASE Courses” in the Google Play and Apple Stores to download.



Internet Access

Attendees of the course receive complimentary internet throughout Paradise Point Resort & Spa.

Business Center

The Paradise Point Resort & Spa has a self-service business center which includes a Flight Center, with complimentary boarding pass printing, conveniently located in the lobby.

Safety

Audience seating is on a first come, first served basis. According to fire code, a session must be closed if the room fills to capacity. Inappropriate behavior or undesirable conduct, including, but not limited to, verbal or physical abuse, whether threatened or performed, will not be permitted or tolerated. You must wear your name badge at all times when attending the session or events.

Photography/AV Policy

No person may record any portion of the 31st Annual State-of-the-Art Echocardiography, either by video, still or digital photography, audio or any other recording or reproduction mechanism. This includes recording of presentations and supporting audio visual materials and of poster presentations and supporting poster materials.

Taking photos of, or recording the content of, presentation slides is also prohibited and is considered intellectual piracy. Attendees who ignore this policy will be asked to leave the educational session and are at risk of losing their name badge and attendance privileges. Photographs taken for the purpose of sharing on social media is allowed, but should avoid showing presentation slides. Please use **#EchoSOTA** when posting on social media.

ASE reserves the rights to all recordings or reproductions at ASE meetings. Please be aware that during the 31st Annual State-of-the-Art Echocardiography, attendees, vendors, guests and exhibitors may be photographed or videotaped by ASE staff capturing the event. Some of these photographs or videos may be displayed by ASE in future publication or other materials. By virtue of your attendance, you agree to allow ASE to use photographs of you in its promotional materials.

Children

ASE does not offer childcare services. Due to limited seating capacity and the highly technical nature of this program, children are not allowed to attend the educational session. For their safety, children must be accompanied by an adult at all times when attending the course events.

Networking Reception

ASE cordially invites you and your guests to the 31st Annual State-of-the-Art Echocardiography Attendee Reception on Monday evening, February 19. This casual reception offers you the perfect opportunity to meet faculty, and visit with exhibitors, friends, and colleagues.

San Diego

California's second largest city and the United States' eighth largest, San Diego is renowned for its idyllic climate, 70 miles of pristine beaches, and a dazzling array of world-class family attractions. Popular attractions include the world-famous San Diego Zoo and San Diego Zoo Safari Park, SeaWorld San Diego, and LEGOLAND California. With an average temperature of 72 degrees year-round, San Diego offers an expansive variety of things to see and do, appealing to guests of all ages from around the world.

Paradise Point Resort & Spa

Paradise Point, San Diego's island resort, is a private 44-acre island tucked away on gentle Mission Bay, minutes from the heart of downtown San Diego. Paradise Point features one mile of sandy beach next door to SeaWorld. Scattered across the island, you will find plenty to do with five swimming pools, beach bonfire pits, a marina, five dining venues, and an award-winning spa. Other amenities include:

- Fitness center and movement studio for fitness classes
- Daily surf lessons at the Paradise Surf Academy
- 18-hole putting golf course
- NBA basketball court
- 5 tennis courts
- Beach cruisers, quadracycles, Segways for rental
- Access to 14 miles of waterfront bike and walking paths
- A short distance to top attractions like Old Town, San Diego Zoo, Balboa Park, and Gaslamp Quarter.

Dining Options

Tidal: Craft and catch converge at Tidal, perched where land meets sea on the shores of Mission Bay.

Barefoot Bar & Grill: This legendary San Diego beach front restaurant offers a casual coastal California dining atmosphere inspired by the local San Diego culture to create bold flavors and new-American dishes.

Tropics Cantina: Located at the Main Pool of our San Diego resort, Tropics Cantina seasonally serves authentic "fresh Mex" straight from Baja California.

Caveman Pizza Company: For a meal of (pre)historic proportions, make your way to the Caveman Pizza Company, located in a noteworthy space designed to double as a bunker in the 1960s.

Food2You Delivery: Enjoy breakfast, lunch, dinner, or a late-night snack in the comfort of your guest room with Paradise Point's Food2You delivery.

FRIDAY, FEBRUARY 16, 2018

7:00 AM **Registration and Breakfast**
Outside Paradise Ballroom

LEARNING LAB *(additional fee required)*

Garden Room

Chairs: *B. Khandheria, R. Lang*

8:00 AM **Introduction to Learning Lab and Computers**
B. Khandheria, R. Lang, M. Umland

8:30 AM **Chamber Quantification Guidelines: Left Ventricle, Left Atrial, Right Ventricle**
D. Ignatowski, E. Kruse, R. Lang, S. Roemer

10:00 AM **Refreshment Break**

10:15 AM **Advanced Hemodynamics including Diastolic Function and Speckle**
B. Khandheria, C. Kramer, M. Umland

12:15 PM **Lunch for Learning Lab Attendees**

1:15 PM **Myocardial and Pericardial Disease**
B. Khandheria, C. Kramer, M. Umland

2:45 PM **Refreshment Break**

3:00 PM **4D - Basic Acquisition, Cropping, and Optimization**
C. Kramer, E. Kruse, R. Lang

4:30 PM **Case Studies**
D. Ignatowski, B. Khandheria, C. Kramer, E. Kruse, R. Lang, S. Roemer, M. Umland

5:00 PM **Adjourn**

SATURDAY, FEBRUARY 17, 2018

7:00 AM **Registration and Breakfast**
Outside Paradise Ballroom

LEARNING LAB *(additional fee required)*

Garden Room

Chairs: *B. Khandheria, R. Lang*

8:00 AM **Valvular Stenosis: How to Measure and Avoid Errors**
B. Khandheria, C. Kramer, S. Roemer

9:30 AM **Valvular Regurgitation: Effective Regurgitant Orifice Area, Etiology**
D. Ignatowski, R. Lang, M. Umland

10:45 AM **Refreshment Break**

11:00 AM **Right Heart: Tricuspid Annular Plane Systolic Excursion, Strain, Pulmonary Artery Pressure**
B. Khandheria, C. Kramer, S. Roemer

12:00 PM **Question and Answer**

12:15 PM **Lunch for Learning Lab Attendees**
Sunset Ballroom and Deck

MAIN CONFERENCE

OPENING SESSION: DIASTOLIC FUNCTION, PERICARDIAL DISEASE

Paradise Ballroom

Moderators: *J. Hung, S. Lester*

1:00 PM	Welcome <i>B. Khandheria, W. Zoghbi</i>
1:15 PM	President's Welcome <i>V. Rigolin</i>
1:30 PM	Case Studies: Applying New ASE Guidelines <i>W. Zoghbi</i>
1:50 PM	Case Studies: Where It Fails or Does It? <i>S. Lester</i>
2:10 PM	Case Studies: Constrictive Pericarditis <i>B. Khandheria</i>
2:30 PM	Case Studies: Pericardial Effusion, Fat Pad <i>J. Hung</i>
2:50 PM	Question and Answer
3:00 PM	Refreshment Break and Visit Exhibits Sunset Ballroom and Deck

3:30 PM Pre-Procedure TAVR Workshop

Paradise Ballroom

Moderators: *M. Saric, M. Umland*

Case Examples: IntraProcedure TEE

R. Hahn, M. Saric

Case Studies: Evaluating Paravalvular Leak Post Procedure

S. Little, D. Rubenson

Complications from Other Labs!

M. Saric

Pre TAVR Measurements, Post TAVR Evaluation: What is a Sweep? What to Report? How to Measure.

D. Ignatowski, C. Kramer, S. Roemer

5:45 PM **Adjourn**

SUNDAY, FEBRUARY 18, 2018

7:00 AM	Registration Outside Paradise Ballroom
7:30 AM	Breakfast and Visit Exhibits Sunset Ballroom and Deck

STRUCTURAL HEART DISEASE: AORTIC STENOSIS

Paradise Ballroom

Moderators: *J. Bax, R. Hahn*

8:00 AM	Case Studies: Step-by-Step Evaluation of Aortic Stenosis Using New ASE Guidelines <i>B. Khandheria</i>
8:20 AM	Case Studies: Low Output, Low Left Ventricular Ejection Fraction, Low Gradient but is it Severe Aortic Stenosis? <i>W. Zoghbi</i>

8:40 AM	Case Studies: Normal Left Ventricular Ejection Fraction, Severe Aortic Stenosis but Low Gradient: Why Strain Helps <i>S. Little</i>
9:00 AM	Compare and Contrast Guidelines on Both Sides of the Pond. Does it Really Matter? Make it Simple <i>J. Bax</i>
9:20 AM	TAVR is Here to Stay but for Whom? Where's the Data? <i>R. Makkar</i>
9:40 AM	Question and Answer
9:55 AM	Refreshment Break and Visit Exhibits Sunset Ballroom and Deck

STRUCTURAL HEART DISEASE: AORTIC REGURGITATION

Paradise Ballroom

Moderators: *S. Little, W. Zoghbi*

10:25 AM	Case Studies: ASE Guideline on Severity of Aortic Regurgitation. What Do I Measure? <i>W. Zoghbi</i>
10:45 AM	Common Errors to Avoid, Sonographers Pay Attention. Readers Watch Out! <i>M. Umland</i>
11:05 AM	Case Studies: Morphology of Aortic Regurgitation, Bicuspid Aortic Valve <i>B. Khandheria</i>
11:25 AM	Unusual Causes of Aortic Regurgitation: Aortitis, Liebman Sach, Root + Valve <i>J. Hung</i>
11:45 AM	Question and Answer
12:05 PM	Lunch and Visit Exhibits Sunset Ballroom and Deck

STRUCTURAL HEART DISEASE: TRICUSPID VALVE

Paradise Ballroom

Moderators: *C. Kramer, R. Lang*

1:05 PM	Imaging the Tricuspid Valve <i>R. Lang</i>
1:25 PM	Percutaneous Tricuspid Valve: Multimodality Imaging <i>J. Bax</i>
1:45 PM	Case Studies: Common Tricuspid Valve Lesions <i>C. Kramer</i>
2:10 PM	Question and Answer
2:20 PM	Refreshment Break and Visit Exhibits Sunset Ballroom and Deck

STRUCTURAL HEART DISEASE: MITRAL REGURGITATION

Paradise Ballroom

Moderators: *R. Lang, M. Umland*

2:50 PM	Case Studies: You Want What? Here is What I Can Provide in Intra-procedural TEE/TTE During TAVR <i>V. Rigolin</i>
3:10 PM	Case Studies: Morphology of Aortic Regurgitation, Root Involvement <i>V. Rigolin</i>

Schedule of Events

3:30 PM	Case Studies: Quantification of Severity of Mitral Regurgitation with New ASE Guidelines <i>W. Zoghbi</i>
3:45 PM	Morphology of the Mitral Valve: 2D, 3D, 4D <i>R. Lang</i>
4:00 PM	Case Studies: Mitral Valve Causing Mitral Regurgitation: Mitral Valve Prolapse, Flail Mitral Valve, Degenerative Mitral Regurgitation <i>J. Hung</i>
4:15 PM	Case Studies: Pickelhaube Sign in Mitral Valve Prolapse <i>D. Ignatowski</i>
4:30 PM	Transcatheter Mitral Valve Repair: State-of-the-Art 2018 <i>R. Makkar</i>
4:45 PM	Case Studies: Mitral Stenosis, Many Flavors, Rheumatic, Calcification <i>D. Rubenson</i>
5:00 PM	Hypereosinophilia and Mitral Valve, Parachute Mitral Valve, Arcade <i>M. Umland</i>
5:15 PM	Case Studies: Percutaneous Mitral Valve for Calcific Disease <i>M. Saric</i>
5:30 PM	Question and Answer
5:45 PM	Adjourn

MONDAY, FEBRUARY 19, 2018

6:45 AM	Registration Outside Paradise Ballroom Breakfast and Visit Exhibits Sunset Ballroom and Deck
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SONOGRAPHERS WORKSHOP: 3D/4D, VALVES, STRAIN

Paradise Ballroom

7:45 – 10:45 AM	How To Acquire and Measure 3D/4D, Valves, Strain <i>D. Ignatowski, C. Kramer, E. Kruse, S. Roemer</i>
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STRUCTURAL HEART DISEASE: LEFT ATRIAL APPENDAGE CLOSURE, PFO CLOSURE

Paradise Ballroom

Moderators: <i>D. Rubenson, M. Saric</i>	
8:00 AM	Case Studies: Left Atrial Appendage, Thrombus, Spontaneous Echo, Contrast <i>D. Rubenson</i>
8:20 AM	Left Atrial Appendage Occlusion in the Era of Novel Oral Anticoagulants <i>R. Makkar</i>
8:40 AM	Case Studies: Role of TEE in Left Atrial Appendage Occluder Device Placement (Pre and Intraprocedure) <i>B. Khandheria</i>
9:00 AM	Case Studies: Oops, What Went Wrong Here? Thrombus On or Leak Around the Device? <i>M. Saric</i>
9:20 AM	Patent Foramen Ovale: Diagnosis and Treatment: Master Clinician and Former Editor Perspective <i>A. DeMaria</i>

9:45 AM	Case Studies: 2D/3D TEE in Evaluation of Atrial Septum <i>R. Lang</i>
10:05 AM	Case Studies: Closure of Paravalvular Regurgitation <i>R. Hahn</i>
10:25 AM	Question and Answer
10:45 AM	Refreshment Break and Visit Exhibits Sunset Ballroom and Deck

CORONARY ARTERY DISEASE

Paradise Ballroom

Moderators: <i>J. Hung, S. Lester</i>	
11:15 AM	Regional Wall Motion Abnormality: I Present, You Diagnose <i>S. Little</i>
11:35 AM	Case Studies: Complications of Myocardial Infarction <i>J. Hung</i>
11:55 AM	Myocardial Contrast Echocardiography: State-of-the-Art 2018 <i>A. DeMaria</i>
12:15 PM	Case Studies: Contrast Enhanced Imaging <i>W. Zoghbi</i>
12:30 PM	Pitfalls: Contrast Enhanced Imaging <i>S. Lester</i>
12:45 PM	Question and Answer
1:00 PM	Lunch and Visit Exhibits Sunset Ballroom and Deck

MYOCARDIAL DISEASE, CARDIOMYOPATHY

Paradise Ballroom

Moderators: <i>B. Khandheria, S. Little</i>	
2:00 PM	Hypertrophic Cardiomyopathy: State-of-the-Art 2018 <i>B. Khandheria</i>
2:20 PM	Variants of Hypertrophic Cardiomyopathy: Lateral Wall, Hypertrophy Papillary Muscle, Mid-Ventricular <i>S. Lester</i>
2:40 PM	Case Studies: Thick Walls, Is this Hypertrophic Cardiomyopathy? <i>M. Umland</i>
3:00 PM	Case Studies: Athlete's Heart <i>R. Lang</i>
3:20 PM	Case Studies in Systemic Illness and the Heart: Sarcoid, Hemochromatosis, Hypereosinophilia <i>M. Saric</i>
3:40 PM	Right Ventricular Dysplasia, Right Ventricular Hypertrophy Due To Pulmonary Hypertension <i>S. Little</i>
4:00 PM	Common Adult Congenital Heart Disease: Atrial Septal Defect, Ventricular Septal Defect, Ebstein's Anomaly <i>M. Saric</i>
4:30 PM	Question and Answer
4:45 – 5:45 PM	Member Reception Sunset Ballroom and Deck

Exhibit Location and Hours

Exhibits are located in the Sunset Ballroom during the dates and hours listed below.

Saturday, February 17.....	1:00 PM – 5:45 PM
Sunday, February 18.....	7:00 AM – 5:45 PM
Monday, February 19.....	6:45 AM – 5:45 PM
Tuesday, February 20.....	7:00 AM – 11:00 AM

Exhibitor Descriptions



Bracco Diagnostics Inc.
 259 Prospects Plains Road, Bldg H
 Monroe Township, NJ 08831
 United States
 Phone: 858-449-0110
usa.braccoimaging.com



Bracco Diagnostics Inc. (BDI), the U.S.-based subsidiary of Bracco Imaging SpA, and part of the Bracco group, is a leader in innovative contrast imaging agents in the U.S. BDI, established in 1994, with headquarters and research offices in Monroe Township, NJ, offers a product and solution portfolio for all key diagnostic imaging modalities: X-ray Imaging (including Computed Tomography-CT, Interventional Radiology, and Cardiac Catheterization), Magnetic Resonance Imaging (MRI), Contrast Enhanced Ultrasound (CEUS), and Nuclear Medicine through radioactive tracers. The diagnostic imaging offer is completed by several medical devices and advanced administration systems for contrast imaging products in the fields of radiology.



Epsilon Imaging
 3917 Research Park Drive, Suite B7
 Ann Arbor, MI 48108
 United States
 Phone: 734-369-5100
epsilon-imaging.com

As a provider of workflow enhancing solutions for cardiology, Epsilon Imaging is transforming cardiac diagnostic workflow with a vendor neutral suite of visualization and analysis software applications designed for echocardiography. Echolsight provides clinical applications for improved quantification of the heart with clinical strain imaging. Applications assist clinicians to enhance, standardize, and streamline interpretation and monitoring of echo studies. Learn more by visiting epsilon-imaging.com.



GE Healthcare
 9900 Innovation Drive
 Wauwatosa, WI 53226
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TUESDAY, FEBRUARY 20, 2018

7:00 AM	Registration Outside Paradise Ballroom
7:30 AM	Breakfast and Visit Exhibits Sunset Ballroom and Deck
POTPOURRI Paradise Ballroom Moderator: <i>S. Little</i>	
8:00 AM	Cardio-Oncology: 2018 <i>J. Hung</i>
8:20 AM	Sonographer's Guide to Evaluation of Right Ventricle in Pulmonary Hypertension <i>S. Roemer</i>
8:40 AM	Case Studies: Endocarditis <i>S. Little</i>
9:00 AM	Case Studies: Disease of Aorta: Marfan, Dissection, Aortic Atheroma <i>M. Saric</i>
9:20 AM	Refreshment Break and Visit Exhibits Sunset Ballroom and Deck
9:50 AM	Case Studies: LVAD <i>C. Kramer</i>
10:10 AM	Case Studies: Left Ventricular Noncompaction <i>M. Umland</i>
10:30 AM	Closing Remarks <i>B. Khandheria, W. Zoghbi</i>
11:00 AM	Adjourn

We hope to see you at the

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