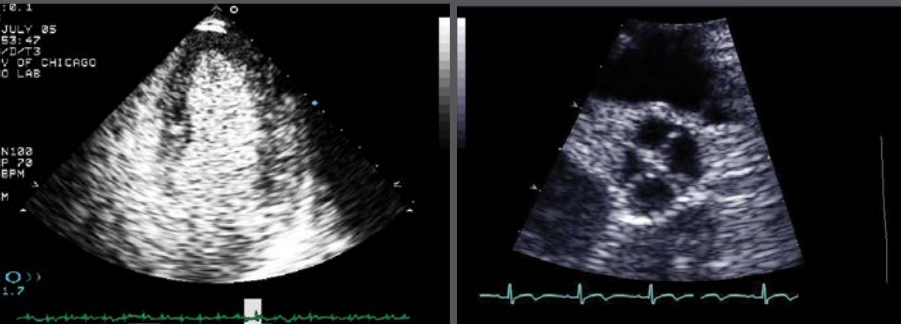


# State-of-the-Art ECHOCARDIOGRAPHY: ECHO SOUTHWEST

# 30<sup>th</sup> ANNUAL



## ADVANCE PROGRAM

**February 18-21, 2017**

**Optional Learning Lab Session**

February 17-18, 2017 *(Additional Fee Required)*

**Hilton Tucson El Conquistador  
Golf & Tennis Resort, Tucson, AZ**

### Course Director

**Steven J. Lester, MD, FASE**  
Mayo Clinic, Scottsdale, AZ

### Co-Director & Learning Lab Director

**Bijoy K. Khandheria, MD, FASE**  
Past President, ASE  
Aurora Healthcare, Milwaukee, WI

### Learning Lab Co-Director

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

## NEW FOR 2017

- Breakout sessions covering new diastolic function guidelines
- TAVR Workshop
- More cases during Learning Lab

Register now at [ASEcho.org/SOTA](http://ASEcho.org/SOTA)



Jointly Provided by ASE and the ASE Foundation



# Program Information

## Program Overview

The 30th Annual State-of-the-Art Echocardiography: Echo Southwest content will focus on new technologies and techniques. The faculty will provide expertise on strain imaging, 3D echocardiography, valve disease, and intervention.

A transcatheter aortic valve replacement workshop on Sunday afternoon will be 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.

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

## Optional Learning Lab Session

*(Additional Fee Required)*

A learning lab will be offered for a full day on Friday, February 17 and a half day on Saturday, February 18, 2017. This workshop requires separate registration and is included in the total hours of educational content offered at the course.

This intimate workshop, which is limited to 80 registrants, 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.

## Who Should Attend

State-of-the-Art Echocardiography: Echo Southwest'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.

## Course Registration

Registration fees include breakfasts, lunches, breaks, the networking reception, access to course materials, and CME credit. ASE members take advantage of reduced registration fees as a benefit of membership. Register online at [ASEcho.org/SOTA](http://ASEcho.org/SOTA).

## ASE Membership

Nonmember registrants for the 30th Annual State-of-the-Art Echocardiography: Echo Southwest will receive a complimentary American Society of Echocardiography (ASE) membership through December 31, 2017, with their registration. Nonmember registration is only available to new ASE members. ASE serves its members in numerous ways by providing education, advocacy, research, practice guidelines, and a community for their profession. ASE membership includes over \$750 of FREE CME credits a year, in addition to discounts on all ASE educational courses and products. Also included is a monthly subscription to the *Journal of the American Society of Echocardiography* (JASE), help with legislative coding and reimbursement issues, and other career resources. A plethora of online tutorials, webinars, and other educational activities make membership beneficial to echocardiographers located around the world. View the extensive list of member benefits at [ASEcho.org](http://ASEcho.org).

## 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

## Accreditation and Designation

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 for a maximum of 38.25 *AMA PRA Category 1 Credits*<sup>™</sup> for attending the learning lab and main conference. Attendees may receive 28 *AMA PRA Category 1 Credits*<sup>™</sup> for attendance of the main conference only. 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 38.25 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity.



"Fantastic course. The learning lab was a truly unique and outstanding experience!"

— 2015 Echo Southwest Attendee

## Tucson

Tucson is surrounded by five mountain ranges making it a perfect place to spend some time off the beaten path exploring the wide-open wonder of the Southwest. Wander through the cascades of Seven Falls at Sabino Canyon, discover the beauty of the majestic cacti of Saguaro National Parks, hike the high-pine and aspen forests of Mt. Lemmon, and explore the otherworldly depths of Colossal Cave or Kartchner Caverns.

What makes the city so special is that despite being a growing metropolis, it still retains its friendly, typically Arizonan, western charm. Feed your spirit in the city's museums and galleries, or travel through time discovering Tucson's unique cultural legacy. From the masterful 1700s art and architecture of Mission San Xavier del Bac to 300 vintage-to-modern aircraft illuminating a century of military and aerospace history at the Pima Air & Space Museum there is bound to be something of interest to everyone.

### Two local events happening in Tucson during Echo Southwest 2017 are:

The **Frida Kahlo: Art, Garden, Life** exhibition at the Tucson Botanical Gardens. Designed by one of the world's premier botanical gardens, the New York Botanical Gardens, the Tucson Botanical Gardens was selected as the only institution to receive this extraordinary exhibition. This exhibit examines Kahlo's work through the lens of the plants and nature in her paintings and her personal gardens. [TucsonBotanical.org](http://TucsonBotanical.org)

The **92nd Annual Tucson Rodeo — La Fiesta de los Vaqueros** (Celebration of the Cowboy), is one of the top 25 professional rodeos in North America. Events are scheduled February 18–26, 2017. [TucsonRodeo.com](http://TucsonRodeo.com).

## Lodging and Travel

The Hilton El Conquistador Golf & Tennis Resort rests in the shadow of the Santa Catalina Mountains under the warm southwestern sun and is the location of the 2017 Echo Southwest educational course. The setting is ideal for participants to bring their families and enjoy some vacation time. ASE has secured a room block at a rate of \$175 a night. A resort fee of \$20 per room per day is included in your room rate. This fee includes internet in the guest rooms and public areas for up to two devices, any local and 800 access guest room phone calls, two complimentary bottles of water upon arrival, 15% off massage treatments at Elements Spa, daily use of fitness facilities and fitness classes, one hour use of putting green per day, one hour use of driving range per room per day, one hour of tennis court usage per room per day, two hours of mountain bike usage per room per day, and expanded shuttle service to Oro Valley Marketplace shopping and dining district, as well as the Country Club facilities.

The Tucson International Airport is located 23 miles from the Hilton El Conquistador Golf & Tennis Resort. There are direct flights into Tucson from these major cities: Atlanta, Chicago, Dallas/Fort Worth, Denver, Houston, Las Vegas, Los Angeles, Minneapolis/St. Paul, Phoenix, Portland, Salt Lake City, San Diego, San Francisco, and Seattle.

## Networking Reception

ASE cordially invites you and your guests to the 30th Annual State-of-the-Art of Echocardiography: Echo Southwest Attendee Reception on Monday evening, February 20. This casual reception offers you the perfect opportunity to meet faculty, and visit with exhibitors, friends, and colleagues.



“This is one of the best echo conferences in the world due to its comprehensive content, excellent faculty, and outstanding presentations.”

— 2015 Echo Southwest Attendee

## Course Director

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Mayo Clinic  
Scottsdale, AZ

## Co-Director & Learning Lab Director

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Aurora Healthcare  
Milwaukee, WI

## Learning Lab Co-Director

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

## Faculty

**Robert O. Bonow, MD**  
Northwestern University  
Chicago, IL

**Patrick M. McCarthy, MD**  
Northwestern University  
Chicago, IL

**William K. Freeman, MD, FASE**  
Mayo Clinic  
Rochester, MN

**Vera H. Rigolin, MD, FASE**  
President-Elect, ASE  
Northwestern University  
Chicago, IL

**Christopher J. Kramer, BA, ACS, RDCS, FASE**  
Aurora Healthcare  
Milwaukee, WI

**Muhamed Saric, MD, PhD, FASE**  
New York University  
New York, NY

**Eric Kruse, RDCS, RVT, FASE**  
University of Chicago Medical Center  
Chicago, IL

**Matt M. Umland, RDCS, FASE**  
Aurora Healthcare  
Milwaukee, WI

**Sunil V. Mankad, MD, FASE**  
Mayo Clinic  
Rochester, MN

**Susan Wilansky, MD, FASE**  
Mayo Clinic  
Scottsdale, AZ

## FRIDAY, FEBRUARY 17, 2017

6:00 AM **Registration**  
6:30 AM **Breakfast**

**LEARNING LAB** (additional fee required)  
Chairs: *B. Khandheria, R. Lang*

7:30 AM	<b>Fundamental/Basic 3D, Myocardial Strain Imaging, Learn Acquisition Techniques, Knobology</b> <i>C. Kramer, R. Lang, M. Umland</i>
10:30 AM	<b>Refreshment Break</b>
11:00 AM	<b>Diastology 101 and Beyond</b> <i>B. Khandheria, M. Umland</i>
12:30 PM	<b>Lunch for Learning Lab Attendees</b>
1:30 PM	<b>Valve Stenosis: Look, Learn, Do</b> <i>B. Khandheria, C. Kramer, R. Lang, M. Umland</i>
3:30 PM	<b>Refreshment Break</b>
4:00 PM	<b>Valve Regurgitation</b> <i>E. Kruse, R. Lang</i>
6:00 PM	<b>Adjourn</b>

## SATURDAY, FEBRUARY 18, 2017

7:00 AM **Registration and Breakfast**

**LEARNING LAB** (additional fee required)  
Chairs: *B. Khandheria, R. Lang*

8:00 AM	<b>Cardiomyopathy: Hypertrophic Cardiomyopathy, Left Ventricular Non-Compaction</b> <i>B. Khandheria, C. Kramer, M. Umland</i>
10:00 AM	<b>Applying Strain Imaging</b> <i>B. Khandheria, C. Kramer, M. Umland</i>
11:00 AM	<b>Refreshment Break</b>
11:30 AM	<b>3D Imaging</b> <i>E. Kruse, R. Lang</i>
1:00 PM	<b>Adjourn</b>



## MAIN CONFERENCE

### OPENING SESSION: VALVE DISEASE

Moderator: *S. Lester*

8:30 AM	<b>Welcome</b> <i>S. Lester</i>
9:00 AM	<b>Echocardiographic Evaluation of the Tricuspid Valve</b> <i>M. Saric</i>
9:25 AM	<b>When Should We Intervene on the Tricuspid Valve and How?</b> <i>P. McCarthy</i>
9:55 AM	<b>Valvular Heart Disease: Uncommon Etiologies (Radiation, Systemic Diseases, and Drugs)</b> <i>W. Freeman</i>
10:20 AM	<b>Refreshment Break and Visit Exhibits</b>
10:35 AM	<b>Intraoperative Echocardiography</b> <i>S. Mankad</i>
11:00 AM	<b>Read With the Experts: Review Interesting and Complex Cases from Across the Country</b> <i>W. Freeman, S. Mankad, M. Saric, S. Wilansky</i>
12:00 PM	<b>Lunch and Visit Exhibits</b>

### MITRAL REGURGITATION

Moderator: *R. Lang*

1:00 PM	<b>Echocardiographic Evaluation of Primary Mitral Regurgitation</b> <i>R. Lang</i>
1:25 PM	<b>Get With the Guidelines: When Is It Time to Intervene?</b> <i>R. Bonow</i>
1:50 PM	<b>Surgical Treatment for Primary Mitral Regurgitation: What Can Be Done? What Does the Surgeon Want to Do?</b> <i>P. McCarthy</i>
2:15 PM	<b>When Should We Intervene on a Patient Who Has Secondary Mitral Regurgitation?</b> <i>R. Bonow</i>
2:35 PM	<b>Surgery for Secondary Mitral Regurgitation: When to Repair vs. Replace</b> <i>P. McCarthy</i>
2:55 PM	<b>Case Based Review of Mitral Regurgitation: Cases Shown and Discussed</b> <i>R. Bonow, W. Freeman, P. McCarthy, V. Rigolin</i>
3:30 PM	<b>Refreshment Break and Visit Exhibits</b>

### THE MITRACLIP AND WATCHMAN DEVICES

Moderator: *B. Khandheria*

3:50 PM	<b>Echo Before the Clip: What Should the Echo Report Include?</b> <i>M. Saric</i>
4:10 PM	<b>Cases of the MitraClip: Why Was the Clip Chosen? Show Me What I Need to Do During the Procedure?</b> <i>S. Mankad, V. Rigolin</i>

4:45 PM	<b>The Watchman Device: Who Is This For? What Images and Measurements Do We Need to Provide for the Interventionalist?</b> <i>B. Khandheria</i>
5:10 PM	<b>Cases: Intraoperative Echo Guidance, What Do I Need to Do?</b> <i>B. Khandheria, S. Mankad</i>
5:30 PM	<b>Adjourn</b>

## SUNDAY, FEBRUARY 19, 2017

6:30 AM	<b>Registration Breakfast and Visit Exhibits</b>
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### AORTIC VALVE DISEASE

Moderator: *S. Lester*

7:30 AM	<b>Echocardiographic Evaluation of Aortic Stenosis</b> <i>S. Lester</i>
7:55 AM	<b>When Should We Refer for Valve Replacement?</b> <i>R. Bonow</i>
8:20 AM	<b>Aortic Stenosis: Area Gradient Mismatch</b> <i>S. Lester</i>
9:05 AM	<b>Echocardiographic Evaluation of Aortic Regurgitation</b> <i>W. Freeman</i>
9:30 AM	<b>Refreshment Break and Visit Exhibits</b>
9:45 AM	<b>Get With The Guidelines: When Should I Refer to a Surgeon?</b> <i>R. Bonow</i>
10:10 AM	<b>Surgical Considerations for Aortic Valve Disease: What is the Best Operation?</b> <i>P. McCarthy</i>
10:35 AM	<b>Question and Answer</b> <i>All Faculty</i>

### PROSTHETIC VALVES

Moderator: *S. Lester*

11:00 AM	<b>Echocardiographic Evaluation of an Aortic Prosthesis</b> <i>S. Wilansky</i>
11:25 AM	<b>Echocardiographic Evaluation of a Mitral Prosthesis</b> <i>V. Rigolin</i>
11:50 AM	<b>Question and Answer</b> <i>All Faculty</i>
12:00 PM	<b>Lunch and Visit Exhibits</b>
1:00 – 4:30 PM	<b>TAVR Workshop: Echo Measurements Pre, Post, and Intra Procedure</b> <i>B. Khandheria, C. Kramer, M. Saric, M. Umland</i>
4:30 PM	<b>Refreshment Break and Visit Exhibits</b>
4:45 – 5:45 PM	<b>Echo Jeopardy</b> Chair: <i>S. Mankad</i> Team 1 <i>S. Lester, V. Rigolin</i> Team 2 <i>R. Lang, S. Wilansky</i> Team 3 <i>B. Khandheria, M. Saric</i>

# Schedule of Events

## MONDAY, FEBRUARY 20, 2017

6:30 AM **Registration  
Breakfast and Visit Exhibits**

### SUNRISE SESSION: CONTRAST ECHOCARDIOGRAPHY

Moderator: *C. Kramer*

7:00 AM **What Is Echocardiographic Contrast? What Agents Are There?**  
*C. Kramer*

7:15 AM **How Should it be Administered and How Do I Optimize My Machine Settings**  
*M. Umland*

7:30 AM **I Hear Contrast is Not Safe. Is That True?**  
*M. Saric*

7:40 AM **How Should I Set Up My Lab So That Contrast Can Be Used Efficiently?**  
*M. Umland*

7:55 AM **Adjourn**

### LEFT AND RIGHT VENTRICLE

Moderator: *R. Lang*

8:00 AM **The Left Ventricle: How Should We Quantify Its Size and Function; Is It Time for 3D in Everyone?**  
*R. Lang*

8:25 AM **Myocardial Imaging: Strain in the Assessment of Left Ventricular Function**  
*S. Lester*

9:00 AM **Echocardiographic Evaluation of Left Ventricular Diastolic Function**  
*S. Wilansky*

9:25 AM **The Silent Epidemic: Diastolic Function and Clinical Outcome**  
*S. Lester*

9:45 AM **Cases: Evaluation of Diastolic Function**  
*S. Lester, S. Wilansky*

10:30 AM **Refreshment Break and Visit Exhibits**

10:50 AM **Pericardial Disease: Constriction and Tamponade**  
*B. Khandheria*

11:15 AM **How Should I Evaluate Right Ventricular Size and Function?**  
*R. Lang*

11:40 AM **Echocardiography: A Pulmonary Artery Catheter in a Box**  
*M. Saric*

12:05 PM **Read With The Experts: Interesting Cases Highlighting the Evaluation of Ventricular Function**  
*B. Khandheria, R. Lang*

12:30 PM **Lunch and Visit Exhibits**

1:30 PM **Cardio-Oncology: What Is the Role of the Echo Lab and How Does the Echo Help in Management Decisions?**  
*B. Khandheria*

1:55 PM **3D Imaging of the Tricuspid Valve: Does It Really Help Me?**  
*R. Lang*

2:20 PM **Refreshment Break and Visit Exhibits**

### BREAK OUT SESSIONS: SMALL GROUPS REVIEWING THE MACHINES AND TECHNIQUES

2:30 – 5:10 PM **3D Evaluation of the Left Ventricle**  
*E. Kruse, R. Lang*

**Strain Imaging**  
*B. Khandheria, M. Umland*

**Valve Disease: How to Acquire and Crop the Images**  
*C. Kramer, S. Mankad*

5:15 PM **Networking Reception**

## TUESDAY, FEBRUARY 21, 2017

7:00 AM **Registration**

7:30 AM **Breakfast and Visit Exhibits**

### POTPOURRI

Moderator: *S. Lester*

8:00 AM **Stress Echocardiography: Indications, Interpretation, and Prognostication**  
*S. Lester*

8:25 AM **The Role of Stress Testing in Valvular Heart Disease**  
*S. Wilansky*

8:50 AM **Read with the Experts: Cases in Stress Echocardiography**  
*S. Mankad, S. Wilansky*

9:30 AM **Hypertrophic Cardiomyopathy: Diagnosis and Management**  
*W. Freeman*

9:55 AM **Hypertrophic Cardiomyopathy or Phenocopy?**  
*S. Lester*

10:45 AM **Question and Answer**  
*All Faculty*

11:00 AM **Refreshment Break and Visit Exhibits**

11:15 AM **Left Ventricular Assist Device: What Should I Report**  
*M. Saric*

11:40 AM **Complications of Myocardial Infarction**  
*S. Wilansky*

12:05 AM **Acute Aortic Syndromes**  
*W. Freeman*

12:30 PM **Questions and Summary**  
*All Faculty*

12:45 PM **Adjourn**



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## 30th Annual State-of-the-Art Echocardiography: Echo Southwest February 18-21, 2017

Hilton Tucson El Conquistador Golf & Tennis Resort, Tucson, AZ

Your State-of-the-Art Echocardiography registration fee includes breakfasts, breaks, lunches, a reception, access to course materials, and a maximum of 38.25 CME credits and MOC points.

Name: \_\_\_\_\_

First Name

Middle Initial

Last Name

Credential:  MD  DO  PhD  RN  RCS  RDCS  Other

Institution: \_\_\_\_\_

Email Address: \_\_\_\_\_

(All correspondence regarding your registration including your confirmation will be sent to this email address.)

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

If you need disability accommodations, please check here and advise us of your needs at least two weeks before the program.

**Special Needs:** ASE encourages participation by all individuals. If you have a disability or other specific needs, advance notification will help ASE to better serve you. Please contact ASE by email at [sota@asecho.org](mailto:sota@asecho.org) or telephone at 919-861-5574.

Special Dietary Needs: \_\_\_\_\_

### Registration Fees: Please circle the registration type you would like to purchase

	Through January 17, 2017	After January 17, 2017
<b>ASE Physician Member</b>	<b>\$725</b>	<b>\$825</b>
<b>Physician Nonmember*</b>	<b>\$899</b>	<b>\$999</b>
<b>ASE Sonographer/Allied Health Member/Fellow Member</b>	<b>\$550</b>	<b>\$650</b>
<b>Sonographer/Allied Health Nonmember/Fellow Nonmember*</b>	<b>\$650</b>	<b>\$750</b>
<b>One-day Rate: (only one day can be selected) Sunday, Monday, Tuesday, Wednesday</b>	<b>\$250</b>	
<b>Preconference Optional Session Fees Attendees must register for this workshop in advance in order to attend due to limited seating available.</b>	<b>ASE Member</b>	<b>Non-Member</b>
<b>Learning Lab: February 17-18, 2017</b>	<b>\$450</b>	<b>\$550</b>

\* This registration fee includes ASE membership through December 31, 2017. Nonmember registration is only available to new ASE members.

### Payment Information

Payment must accompany this form.

Check (payable to American Society of Echocardiography in U.S. dollars drawn on a U.S. bank)

Credit Card:  Visa  MasterCard  American Express

Cardholder's Name: \_\_\_\_\_

Card Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

AMERICAN SOCIETY OF ECHOCARDIOGRAPHY INC, P.O. Box 890082, Charlotte, NC 28289-0082

Phone: 919-861-5574 • Fax: 919-882-9900 • Email: [sota@asecho.org](mailto:sota@asecho.org) • Website: [ASEcho.org/SOTA](http://ASEcho.org/SOTA)



# ASE Foundation

American Society of Echocardiography  
2100 Gateway Centre Blvd.  
Suite 310  
Morrisville, NC 27560

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