**COURSE OBJECTIVES**

**Fundamentals of Echocardiography**

The format of this program will include didactics, workshops, and small group interactive case discussions to review the role of perioperative echocardiography in diagnosing cardiac and great vessel pathology in patients undergoing cardiac and noncardiac procedures or interventions in surgical or other clinical settings. Upon completion of this course, the participant will be able to understand the application of echocardiographic principles, including the physics of ultrasound and Doppler echocardiography, and hemodynamic quantification. Course participants will have a better understanding of the pathophysiology of valvular heart disease, cardiac function and dysfunction, and diseases of the great vessels.

Upon completion of this educational activity, the participant should be able to

- apply the essential principles of 2D echocardiography and spectral and color Doppler echocardiography in clinical settings
- recognize the components of the comprehensive perioperative echocardiographic examination
- identify cardiac and great vessel anatomy and evaluate the function of the ventricles and heart valves
- describe common artifacts and misinterpretations of normal cardiac anatomy
- perform echocardiographic measurements essential for clinical decision making
- recognize the role of echocardiography in the identification of diastolic dysfunction in heart failure
- diagnose the basic congenital cardiac anomalies.

Designated for a maximum of 20.25 *AMA PRA Category 1 Credits™.*

**Porcine Heart Wet Lab: Hands-On Dissection**

Upon completion of this educational activity, the participant should be able to

- identify cardiac and great vessel anatomy in the porcine heart
- correlate porcine anatomical structures to 2D echocardiographic structures
- correlate porcine anatomical structures to surgical anatomic landmarks.

Designated for a maximum of 3.25 *AMA PRA Category 1 Credit(s)™.*

**Fundamentals of 3D Echocardiography and Tissue Doppler, Strain, and Speckle**

This program will review the role of new and innovative imaging techniques in perioperative decision-making. It will include both large-group didactics and rotating, interactive, small-group instruction and case discussions. The participant will gain a better understanding of how to incorporate innovative imaging into daily practice.

Upon completion of this educational activity, the participant should be able to

- recognize and acquire routine 3D echocardiographic images
- perform basic manipulation and measurements of 3D datasets
- recognize and acquire images for tissue Doppler analysis
- describe cardiac deformation with Doppler and speckle imaging
- incorporate these modalities in clinical decision making.

Designated for a maximum of 6.0 *AMA PRA Category 1 Credit(s)™.*
Application of Echocardiography

Upon completion of this educational activity, the participant should be able to:

• assess types, establish severity, and determine etiology of various types of mitral regurgitation
• recognize the role of echocardiography in the identification of diastolic dysfunction in heart failure
• delineate the role of perioperative echocardiography in guiding surgical decision making for cardiac patients undergoing valve repair or replacement, thoracic aortic repair, and mechanical circulatory support
• describe the approach to echocardiographic assessment of unexpected valve lesions in patients undergoing valve repair/replacement
• explain the echocardiographic evaluation of ventricular assist devices to support the separation from cardiopulmonary bypass
• list the role of perioperative echocardiography in percutaneous procedures commonly performed in the catheterization lab or hybrid operating room
• describe the interaction between the different specialists—surgeons, cardiologists, and anesthesiologists—in complex decision-making processes involved in the perioperative care of surgical patients with cardiovascular disease
• list the essential elements for obtaining training and certification to establish competence in basic and advanced perioperative echocardiography.

Designated for a maximum of 11.75 AMA PRA Category 1 Credit(s)™.

Problem-Based Learning Discussions (PBLDs): The Surgeon Asks You...

Should I Be Worried About SAM?

At the conclusion of this PBLD, the participant should be able to:

• describe the mechanisms of mitral regurgitation in association with SAM
• describe the echocardiographic and surgical risk factors, which increase the likelihood to develop SAM following a mitral valve repair
• discuss surgical and anesthetic management techniques to minimize the likelihood of SAM after mitral valve repair
• discuss surgical and anesthetic management techniques to consider if SAM occurs following a mitral valve repair.

How Bad Is the LV Function?

At the conclusion of this PBLD, the participant should be able to:

• describe systolic LV function using 2D ultrasound and tissue Doppler
• recognize the echocardiographic manifestations of regional LV systolic dysfunction
• describe the hibernating myocardium and stunned myocardium in the setting of coronary artery disease
• discuss the use of dobutamine to help define revascularization plans in patients with segmental wall motion abnormalities.

Do I Need to Replace the Aortic Valve?

At the conclusion of this PBLD, the participant should be able to:

• discuss the management of patients with moderate aortic stenosis in association with other cardiac surgical procedures
• define the echocardiographic evidence suggesting replacement
• define low gradient aortic stenosis and discuss the differences between severe aortic stenosis vs. pseudostenosis
• discuss the utilization of dobutamine to help evaluate low flow, low gradient aortic stenosis
• discuss current management guidelines regarding the echocardiographic evaluation and management of aortic stenosis.

Designated for a maximum of 2.0 AMA PRA Category 1 Credit(s)™.

3D Imaging and Cardiac Kinetics Laptop Computer Workshop

Upon completion of this educational activity, the participant should be able to:

• perform a basic three dimensional assessment of the mitral and aortic valve
• identify basic left ventricular deformation characteristics

Designated for a maximum of 3.0 AMA PRA Category 1 Credit(s)™.
PROGRAM COMMITTEE AND FACULTY

Disclosures (as of February 11, 2015)

<table>
<thead>
<tr>
<th>Nature of Relationship</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No relevant financial relationships</td>
<td></td>
</tr>
<tr>
<td>2. Advisory board member</td>
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<td>3. Board of directors</td>
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<td>4. Consultant</td>
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<td>5. Employee</td>
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<td>6. Expert reviewer</td>
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<td>7. Expert testimony</td>
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<td>8. Founder</td>
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<td>9. Independent contractor</td>
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<td>11. Speakers’ bureau</td>
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<td>12. Stock holder</td>
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<td>13. Other</td>
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</table>

Disclosure Statement
Faculty members, chairpersons, and speakers have indicated, in accordance with the Accreditation Council for Continuing Medical Education (ACCME) Standards and SCA policy, that they or a member of their immediate household have a relationship with the manufacturer(s) of commercial products or providers of commercial services discussed in their educational presentation or with SCA educational supporters. Such relationships include, but are not limited to, member of the board of directors, advisory board, or speakers’ bureau; participant in industry-sponsored research; recipient of a research grant; employee; investor; and consultant. Such relationships will be communicated to registrants in final course materials and in presentation slides on site prior to the session. Invited speakers have agreed that their presentations will be objective, they will provide a balanced view of diagnostic and therapeutic options, and discussion of any off-label or investigational use of a commercial product will be disclosed to the audience.

Program Directors

Douglas Shook, MD FASE
- Assistant Professor, Anesthesiology
- Program Director, Cardiothoracic Anesthesia Fellowship
- Brigham and Women’s Hospital
- Disclosure: St. Jude Medical, 13; Edwards Lifesciences, 13; Sorin Group, 13

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- Director, Cardiac Anesthesiology
- Weill Cornell Medical College
- Disclosure: 1

Madhav Swaminathan, MD FASE
- Associate Professor, Anesthesiology
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- Duke University Medical Center
- Disclosure: 1

Program Committee

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- Missoula Anesthesiology
- International Heart Institute of Montana
- Disclosure: Chest Innovations, 12

Katherine Grichnik, MD FASE
- Director, Research, Education, and Quality
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- Disclosures: Novartis, 4; Amgen, 4; Castle Biologics, 4; Digital Derm, 4

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- Acting Instructor
- University of Washington
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- Disclosure: 1

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- Disclosure: 1

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- Disclosure: 1

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- Disclosures: Covidien, 10; Grifols, 2, 10; Shire ViroPharma, 10

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- Disclosure: 1

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- Associate Professor, Anesthesiology
- Toronto General Hospital
- University of Toronto, Canada
- Disclosure: 1

Edwin Avery, MD
- Associate Professor, Anesthesiology
- Case Western Reserve University School of Medicine
- Disclosure: 1

Thomas Burch, MD
- Adult and Pediatric Cardiothoracic Anesthesiology
- Beth Israel Deaconess Medical Center and Boston Children’s Hospital
- Harvard Medical School
- Disclosure: PTEmasters.com, 13

Albert T. Cheung, MD
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- Division Chief, Cardiothoracic Anesthesiology
- Program Director, Adult Cardiothoracic Anesthesiology
- Stanford University School of Medicine
- Disclosures: Covidien, 4; Uptodate, 13

Daniel Drake, MD
- Director
- Michigan Society of Thoracic & Cardiovascular Surgeons
- Mitral Initiative
- Disclosure: 1

Sidney Edelman, PhD
- Director
- ESP, Inc.
- Disclosure: 1

Meghann Fitzgerald, MD
- Assistant Professor, Anesthesiology
- Weill Cornell Medical College
- Disclosure: 1
CME ACCREDITATION

The Society of Cardiovascular Anesthesiologists (SCA) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. SCA designates the following live activities for a maximum of 46.25 AMA PRA Category 1 Credits™.

- Fundamentals of Echocardiography: 20.25 AMA PRA Category 1 Credit(s)™
- Porcine Heart Wet Lab: Hands-On Dissection: 3.25 AMA PRA Category 1 Credit(s)™
- Fundamentals of 3D Echocardiography and Tissue Doppler, Strain, and Speckle: 6.0 AMA PRA Category 1 Credit(s)™
- Application of Echocardiography: 11.75 AMA PRA Category 1 Credit(s)™
- 3D Imaging and Cardiac Kinetics Laptop Computer Workshop: 3.0 AMA PRA Category 1 Credit(s)™
- Problem-Based Learning Discussions (PBLDs): The Surgeon Asks You...: 2.0 AMA PRA Category 1 Credit(s)™

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

How to Claim Your CME

To claim CME credit, visit www.scahq.org/Education/Evaluations to complete your 2015 Echo Week evaluations. You must complete the evaluations to claim credit.
## SCHEDULE

### Fundamentals of Echocardiography


### THE REVIEW

#### Sunday, March 22

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>5–8 pm</td>
<td>Registration Open</td>
<td>Ellington Foyer</td>
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<tr>
<td>7–8 pm</td>
<td>PBLDs</td>
<td></td>
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<tr>
<td></td>
<td>Moderators: Annemarie Thompson, MD; Mark A. Taylor, MD FASE (A separate registration fee is required for this session.)</td>
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<tr>
<td></td>
<td>The Surgeon Asks You…</td>
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<tr>
<td></td>
<td>Should I Be Worried About SAM? Douglas Shook, MD FASE; Mark A. Taylor, MD FASE; Lori Heller, MD</td>
<td>Merger G, H, I</td>
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<td></td>
<td>How Bad Is the LV Function? Edwin Avery, MD; John A. Fox, MD</td>
<td>Inman &amp; Ravinia</td>
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<td></td>
<td>Do I Need to Replace the Aortic Valve? Nikolaos J. Skubas, MD FASE; Jonathan D. Leff, MD</td>
<td>Dunwoody &amp; Chastain</td>
</tr>
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</table>

#### Monday, March 23

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>6:30 am–5 pm</td>
<td>Registration Open</td>
<td>Ellington Foyer</td>
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<tr>
<td>6:45–7:15 am</td>
<td>Continental Breakfast</td>
<td>Ellington Foyer</td>
</tr>
<tr>
<td>7:15–7:30 am</td>
<td>Overview and Announcements</td>
<td>Ellington</td>
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<tr>
<td></td>
<td>Douglas Shook, MD FASE; Nikolaos J. Skubas, MD FASE; Madhav Swaminathan, MD FASE</td>
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<tr>
<td>7:30–9:30 am</td>
<td>Image Creation and Views</td>
<td>Ellington</td>
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<td></td>
<td>Moderator: Douglas Shook, MD FASE</td>
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<td></td>
<td>7:30–8:50 am Ultrasound Physics: Breakfast with Edelman</td>
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<td></td>
<td>Sidney Edelman, PhD</td>
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<td>8:50–9:10 am You Are The Artist: Optimizing the Image</td>
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<td></td>
<td>Kathryn Glas, MD MBA FASE</td>
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<td></td>
<td>9:10–9:30 am Principles of Hemodynamics</td>
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<td></td>
<td>Nikolaos J. Skubas, MD FASE</td>
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<tr>
<td>9:30–10 am</td>
<td>Break</td>
<td>Ellington</td>
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<tr>
<td>10 am–Noon</td>
<td>The Views and Function</td>
<td>Ellington</td>
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<td></td>
<td>Moderator: Nikolaos J. Skubas, MD FASE</td>
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<tr>
<td></td>
<td>10–10:20 am The Comprehensive Exam: When Time Is Essential</td>
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<td></td>
<td>Jack Shanewise, MD FASE</td>
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<td></td>
<td>10:20–10:40 am LV–Assessment of Coronary Perfusion and Wall Motion</td>
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<td></td>
<td>John A. Fox, MD</td>
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<td>10:40–11 am LV–Assessment of Systolic Function</td>
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<td></td>
<td>Mark A. Taylor, MD FASE</td>
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<td>11–11:20 am Evaluation of RV Function in Simple Steps</td>
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<td></td>
<td>Sasha K. Shillcutt, MD FASE</td>
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<tr>
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<td>11:20–11:40 am Basic Concept of Diastolic Function</td>
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<td></td>
<td>Annemarie Thompson, MD</td>
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<tr>
<td></td>
<td>11:40 am–Noon Panel Discussion and Audience Q &amp; A</td>
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</tbody>
</table>
Monday, March 23 continued

Noon–1 pm
Lunch Provided

1–3 pm
**Aortic and Mitral Valve Structure and Function**
*Moderator: Katherine Grichnik, MD FASE*

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker(s), MD FASE(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–1:20 pm</td>
<td>Valve Anatomy and Imaging Views</td>
<td>Douglas Shook, MD FASE</td>
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<tr>
<td>1:20–1:40 pm</td>
<td>Mitral Regurgitation</td>
<td>Annette Vegas, MD FRCPC</td>
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<tr>
<td>1:40–2 pm</td>
<td>Mitral Stenosis</td>
<td>Lori Heller, MD</td>
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<tr>
<td>2–2:20 pm</td>
<td>Aortic Regurgitation</td>
<td>Jonathan D. Leff, MD</td>
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<tr>
<td>2:20–2:40 pm</td>
<td>Aortic Stenosis</td>
<td>Roman M. Sniecinski, MD</td>
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<tr>
<td>2:40–3 pm</td>
<td>Panel Discussion and Audience Q &amp; A</td>
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3–3:30 pm
**Coffee Break**

3:30–5:30 pm
**Right-Sided Valves and Great Vessels**
*Moderator: Lori Heller, MD*

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker(s), MD FASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:30–3:50 pm</td>
<td>Valve and Vessel Anatomy and Views</td>
<td>Meghann Fitzgerald, MD</td>
</tr>
<tr>
<td>3:50–4:10 pm</td>
<td>Tricuspid and Pulmonic Valves</td>
<td>Katherine Grichnik, MD</td>
</tr>
<tr>
<td>4:10–4:30 pm</td>
<td>Aortic Root and Great Vessels</td>
<td>Jack Shanewise, MD FASE</td>
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<tr>
<td>4:30–4:50 pm</td>
<td>Epiaortic/Epicardial Imaging</td>
<td>Kathryn Glas, MD MBA FASE</td>
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<td>4:50–5:10 pm</td>
<td>Pericardial Disease</td>
<td>Edwin Avery, MD</td>
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<td>5:10–5:30 pm</td>
<td>Panel Discussion and Audience Q &amp; A</td>
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5:30–7:30 pm
**Dinner on Your Own**

7:30–9 pm
**Physics and Hemodynamics**
*Moderator: Nikolaos J. Skubas, MD FASE; Douglas Shook, MD FASE*

<table>
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<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker(s), MD FASE</th>
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<tbody>
<tr>
<td>7:30–8:15 pm</td>
<td>Physics and Artifacts: Test Your Knowledge in Anatomy and Physics</td>
<td>Sidney Edelman, PhD; Nikolaos J. Skubas, MD FASE</td>
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<tr>
<td>8:15–9 pm</td>
<td>Hemodynamics Made Easy: How Echo Replaces Catheters</td>
<td>Nikolaos J. Skubas, MD FASE; Douglas Shook, MD FASE</td>
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</table>

**AN INTERACTIVE APPROACH**

Tuesday, March 24

6:30 am–5 pm
**Registration Open**

6:45–7:25 am
**Continental Breakfast with Exhibitors**

7:25–7:30 am
**Overview and Announcements**
*Douglas Shook, MD FASE; Nikolaos J. Skubas, MD FASE; Madhav Swaminathan, MD FASE*
7:30–11 am
**Case-Based Small Groups with Discussions**
*Moderator: Nikolaos J. Skubas, MD FASE*
This workshop will be divided into seven 45-minute sessions, during which all seven topics will be covered concurrently. Participants will rotate through each topic. Please refer to the registration supplement for room assignments.

<table>
<thead>
<tr>
<th>Mitral Regurgitation</th>
<th>Mitral Stenosis</th>
<th>LV: Ischemia &amp; Function</th>
<th>The Right Side</th>
<th>Aortic Stenosis</th>
<th>Aortic Regurgitation</th>
<th>Diastology</th>
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</thead>
<tbody>
<tr>
<td>Annette Vegas, MD MRCPC FASE; Gregg S. Hartman, MD</td>
<td>Lori Heller, MD; Edwin Avery, MD</td>
<td>Mark A. Taylor, MD FASE; John A. Fox, MD</td>
<td>Sasha K. Shilzcutt, MD FASE; Meghan Fitzgerald, MD</td>
<td>Roman M. Sniecinski, MD FASE; Jonathan Ho, MD</td>
<td>Jonathan D. Leff, MD; Charles Nyman, MBBCh</td>
<td>Annemarie Thompson, MD; Thomas Burch, MD</td>
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</table>

7:30–8:15 am Session 1
8:15–9 am Session 2
9:30–10:15 am Session 3
10:15–11 am Session 4

9–9:30 am
**Coffee Break with Exhibitors**

11 am–3:15 pm
**Case-Based Small Groups with Discussions**
*Moderator: Douglas Shook, MD FASE*

| 11–11:20 am | ASDs, VSDs, PFOs Kathryn Glas, MD MBA FASE | Ellington |
| 11:20–11:40 am | Complex Congenital Anomalies Thomas Burch, MD | Ellington |
| 11:40 am–Noon | Panel Discussion and Q & A | Ellington |
| 1–1:45 pm | Session 5 | |
| 1:45–2:30 pm | Session 6 | |
| 2:30–3:15 pm | Session 7 | |

**Noon–1 pm**
**Lunch Provided with Exhibitors**

**3:15–3:40 pm**
**Coffee Break with Exhibitors**

**3:40–5:20 pm**
**Potpourri**
*Moderator: Nikolaos J. Skubas, MD FASE*

| 3:40–4 pm | Cardiomyopathies Andrew Maslow, MD | Ellington |
| 4–4:20 pm | Prosthetic Valves Charles Nyman, MBBCh | |
| 4:20–4:40 pm | TEE Safety Jack Shanewise, MD FASE | |
| 4:40–5 pm | Review of the Complete Exam Gregg S. Hartman, MD | |
| 5–5:20 pm | Panel Discussion and Q & A | |

**5:30–7 pm**
**Vendor Reception**
Meet the vendors and learn about your ultrasound system. Food and beverages will be provided.

**7–9 pm**
**Who Wants to Be an ECHO Millionaire?**
*Moderators: Andrew Maslow, MD; Feroze Mahmood, MD; Peter Panzica, MD*
A review of the first 2 days, this session is an interactive game show in which audience members can participate, answer questions (ask the audience), ask the experts (phone a friend), or reduce the number of options (50/50). It is a fun and relaxed way to learn some pearls in perioperative echocardiography.
Wednesday, March 25

6:30 am–5 pm  
Registration Open  
Ellington Foyer

6–7:45 am  
Continental Breakfast with Exhibitors  
Ellington Foyer

6:30–7:30 am  
PBLDs  
Moderators: Annemarie Thompson, MD; Mark A. Taylor, MD FASE  
(A separate registration fee is required for this session.)

The Surgeon Asks You…  
Should I Be Worried About SAM?  
Lori Heller, MD; Jack Shanewise, MD FASE; Mark A. Taylor, MD FASE  
Inman & Ravinia

How Bad Is the LV Function?  
John A. Fox, MD; Edwin Avery, MD  
Dunwoody & Chastain

Do I Need to Replace the Aortic Valve?  
Jonathan D. Left, MD; Thomas Burch, MD  
Mercer G, H, I

7:45–11 am  
Porcine Heart Wet Lab: Hands-On Dissection  
Moderator: Madhav Swaminathan, MD FASE

All faculty in attendance will be participating. This session is included in both the Fundamentals and Application portions of Echo Week.

7:45–8:15 am  
Overview of Cardiac Surface Anatomy  
Douglas Shook, MD FASE

8:15–11 am  
Porcine Heart Dissection  
Douglas Shook, MD FASE; Matt Maxwell, MD

11 am–12:30 pm  
Lunch on Your Own/Exhibits Open

12:30–2 pm  
Fundamentals of 3D Echocardiography and Tissue Doppler/Strain/Speckle  
Part I: Introduction (Large-Group Format)  
Moderator: Bruce Bollen, MD

This session is included in both the Fundamentals and Application portions of Echo Week.

12:30–12:50 pm  
3D Echo: How Do I Get Started?  
Madhav Swaminathan, MD FASE

12:50–1:10 pm  
Where 3D Makes a Difference  
Douglas Shook, MD FASE

1:10–1:30 pm  
Tissue Doppler: What Is It and How Do I Do It  
Nikolaos J. Skubas, MD FASE

1:30–1:50 pm  
Cardiac Kinetics: Taking the Stress Out of Strain  
Jonathan Ho, MD

1:50–2 pm  
Discussion

2–2:30 pm  
Stretch Break/Exhibits Open  
Ellington Foyer
2:30–7:30 pm  
**Fundamentals of 3D Echocardiography and Tissue Doppler/Strain/Strain/Specule**  
**Part II: Acquisition and Application (Small-Group Instruction)**  
**Moderators:** Douglas Shook, MD FASE; Bruce Bollen, MD  

This workshop will be divided into six 45-minute sessions, during which all six topics will be covered concurrently. Participants will be assigned to a small group and rotate through each topic. Please refer to the registration supplement for room assignments.

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>2:30–3:15 pm</td>
<td>Session 1</td>
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<td>3:15–4 pm</td>
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<td>4–4:45 pm</td>
<td>Session 3</td>
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<td>5:15–6 pm</td>
<td>Session 4</td>
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<tr>
<td>6–6:45 pm</td>
<td>Session 5</td>
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<tr>
<td>6:45–7:30 pm</td>
<td>Session 6</td>
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**4:45–5:15 pm**  
**Coffee Break with Exhibitors**

**Application of Echocardiography**  
*Wednesday, March 25–Friday, March 27 (Includes Porcine Heart Wet Lab: Hands-On Dissection and Fundamentals of 3D Echocardiography and Tissue Doppler/Strain/Specke)*

**DILEMMAS AND CASES**  
**Thursday, March 26**

**6:30 am–5 pm**  
**Ellington Foyer**  
**Registration Open**

**6:45–7:25 am**  
**Ellington Foyer**  
**Continental Breakfast with Exhibitors**

**7:25–7:30 am**  
**Ellington**  
**Overview and Announcements**  
Douglas Shook, MD FASE; Nikolaos J. Skubas, MD FASE; Madhav Swaminathan, MD FASE

**7:30–9:30 am**  
**Ellington**  
**Mitral Valve Dilemmas with Case Discussion**  
*Moderator: Bruce Bollen, MD*

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>7:30–7:50 am</td>
<td>How Do I Determine the Type of MR? Is It Important? Gregg S. Hartman, MD</td>
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<td>7:50–8:10 am</td>
<td>Functional MR in CABG Surgery: How Do I Measure Severity? Stanton K. Sherman, MD FAHA FASE</td>
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<td>8:10–8:30 am</td>
<td>Choosing the Right Repair for MR: What Do I Need to Make a Decision? Daniel Drake, MD</td>
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<td>8:30–8:50 am</td>
<td>MR After Repair: How to Evaluate It and Can It Be Fixed? Christopher A. Troianos, MD</td>
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<td>8:50–9:10 am</td>
<td>Imaging Essentials After Mitral Valve Replacement: What Is Important to Know? Donald O’Corm, MD CM FRCP FACC</td>
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<tr>
<td>9:10–9:30 am</td>
<td>Panel Discussion and Audience Q &amp; A</td>
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**3D Acquisition:**  
*How Do I Get the Best Image? Madhav Swaminathan, MD FASE, Gregg S. Hartman, MD*

**3D Measurements:**  
*Making It Simple Stanton K. Sherman, MD FAHA FASE, Bruce Bollen, MD*

**3D Mitral Valve:**  
*Changing How You Look at the Mitral Valve Feroze Mahmood, MD; Annemarie Thompson, MD*

**3D Aortic Valve:**  
*Measurements From LVOT to Root Annette Vegas, MDCM FRCP FASE; Kent H. Rehfeldt, MD FASE*

**Tissue Doppler/Strain/Specule:**  
*Take Home Points for Daily Practice Nikolaos J. Skubas, MD FASE; Jonathan Ho, MD*

**Practical Cases Where Advanced Imaging Made a Difference**  
Douglas Shook, MD FASE; Charles Nyman, MBCH
Thursday, March 26 continued

9:30–10 am  Ellington Foyer
Coffee Break with Exhibitors

10 am–Noon  Ellington
Aortic Valve Dilemmas with Case Discussion
Moderator: Christopher A. Troianos, MD

10–10:20 am  Ellington Foyer
Low Gradient AS: Valve Area or Gradient? Feroze Mahmood, MD

10:20–10:40 am  Ellington Foyer
Moderate AS in CABG Surgery: When to Operate? What Measurements Are Important? Vinod Thourani, MD FACS FACC

10:40–11 am  Ellington Foyer
Case: When TAVR Goes Well: What Measurements Are Important for Success? Roman M. Sniecinski, MD FASE

11–11:20 am  Ellington Foyer
Case: When TAVR Goes Bad: How Does Imaging Help? Alina Nicoara, MD FASE

11:20–11:40 am  Ellington Foyer
Post AVR: Are Gradients Important? What Is? Kent H. Rehfeldt, MD FASE

11:40 am–Noon  Ellington Foyer
Panel Discussion and Audience Q & A

Noon–12:15 pm  Ellington Foyer
Lunch Provided with Exhibitors

12:15–1 pm  Ellington
Lunch Session: 8th Annual Arthur E. Weyman, MD, Lecture
Moderator: Madhav Swaminathan, MD FASE
Speaker: Albert T. Cheung, MD

1–3 pm  Ellington
Cardiomyopathy: Success with Failure
Moderator: Kent H. Rehfeldt, MD

1–1:20 pm  Ellington Foyer
Imaging Essentials Before VAD Placement: What Does the Surgeon Need to Know? Michele Sumler, MD

1:20–1:40 pm  Ellington Foyer
Diastolic Heart Failure: Do Measurements Work? Alina Nicoara, MD FASE

1:40–2 pm  Ellington Foyer
When Right Goes Wrong: How to Identify Right Heart Failure Donald Oxorn, MD CM FRCPC FACC

2–2:20 pm  Ellington Foyer
Using TEE to Detect VAD Complications Michele Sumler, MD

2:20–2:40 pm  Ellington Foyer
Using TEE in ECMO Deployment: Problems with VW and VA ECMO Robert M. Savage, MD FACC

2:40–3 pm  Ellington Foyer
Panel Discussion and Audience Q & A

3–3:30 pm  Ellington Foyer
Coffee Break with Exhibitors

3:30–5 pm  Ellington
Complex Imaging Dilemmas
Moderator: Alina Nicoara, MD FASE

3:30–3:50 pm  Ellington Foyer
Aortic Root Replacement: Should the Valve Be Fixed or Spared? Kent H. Rehfeldt, MD FASE

3:50–4:10 pm  Ellington Foyer
Tricuspid Valve in Left Heart Surgery: When to Fix? Feroze Mahmood, MD

4:10–4:30 pm  Ellington Foyer
Mitral Regurgitation in AVR: When to Fix? Stanton K. Sherman, MD FAHA FASE

4:30–4:50 pm  Ellington Foyer
TEE in the Unstable Postoperative Patient: When Do We Go Back to the OR? Christopher A. Troianos, MD

4:50–5 pm  Ellington Foyer
Further Panel Discussion and Wrap-Up
5–6:30 pm
Dinner on Your Own

6:30–9:30 pm
3D Imaging and Cardiac Kinetics Laptop Computer Workshop
(This session is limited to 180 participants. A separate registration fee is required.)
Moderators: Madhav Swaminathan, MD FASE, Douglas Shook, MD FASE
This workshop is divided into three 1-hour sessions, during which the following three topics will be covered concurrently. Attendees will rotate through each of the three topics. Please refer to the registration supplement for room assignments.

6:30–7:30 pm Session 1
7:30–8:30 pm Session 2
8:30–9:30 pm Session 3

TRAINING AND EXAM

Friday, March 27

6:30 am–5 pm
Registration Open

7–7:25 am
Continental Breakfast

7:25–7:30 am
Overview and Announcements
Douglas Shook, MD FASE, Nikolaos J. Skubas, MD FASE, Madhav Swaminathan, MD FASE

7:30–9:30 am
Training and (Re)Certification: Keeping Up to Date
Moderator: Madhav Swaminathan, MD FASE

7:30–7:50 am Case Studies: What Is Expected from an Echocardiographer with Basic Certification? Robert M. Savage, MD FACC
7:50–8:10 am Case Studies: What Is Expected from an Echocardiographer with Advanced Certification? Donald Oxorn, MD CM FRCPC FACC
8:10–8:30 am Recertification: How Do I Keep My Skills and Knowledge Current? Alina Nicoara, MD FASE
8:30–8:50 am Perioperative Echo Training: How to Get It Done Christopher A. Troianos, MD
8:50–9:10 am Perioperative Echo Certification: What I Need to Know Stanton K. Sherman, MD FAHA FASE
9:10–9:30 am Panel Discussion and Audience Q & A

9:30–10 am
Coffee Break

10 am–12:30 pm
Test Yourself: A Comprehensive Review of Echo Week
Moderators: Feroze Mahmood, MD; Peter Panzica, MD
This mock exam will test your comprehension of concepts discussed during Echo Week and will be followed by a review of the questions.

12:30 pm
Adjourn
Introducing a new era in premium ultrasound. Philips’ new EPIQ platform has Anatomical Intelligence to help you access information with minimal user interaction, such as automatic detection of the LV to provide an Auto EF. And a new, smart, ergonomic design makes EPIQ easier to operate while decreasing steps to perform the exam. It’s a whole new way of doing echo and supporting your clinical diagnoses.

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Examination Date: Friday, July 13, 2015

Deadlines to Submit Applications:
Early Registration ................................................................................................ Monday, March 16, 2015
Late Registration ............................................. Monday, March 17, 2015 thru Monday, June 1, 2015

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