GENERAL INFORMATION

The 21st Annual SCA Echo Week is a 5-day course covering the fundamentals and applications of echocardiography. This interdisciplinary program, co-sponsored by the Society of Cardiovascular Anesthesiologists (SCA) and the American Society of Echocardiography (ASE), has been developed to meet the continuing demand for education on the applications of ultrasound technologies as a fundamental diagnostic modality and monitor of perioperative cardiac performance.

How to Access Echo Week Materials

Echo Week abstracts, evaluations, handouts, and syllabi are available electronically. To access them:

• Visit www.scahq.org/2018echoweek on your computer or laptop and click on the link to access the SCA meeting app.

• Download the SCA meeting app to your mobile device or tablet. Search SCA 2018 in your app store or visit www.tripbuildermedia.com/apps/sca.

All preregistered attendees received meeting app login instructions prior to the start of Echo Week. The meeting app can be accessed via a mobile phone, tablet, or computer. Attendees will have access to Echo Week materials before, during, and after the meeting. Log in with the email used in your registration and the password ECHO18. If there are no handouts listed for a particular session, none were provided by the presenter. Echo Week materials will be available through fall 2018.
CME Information
Attendees can review general continuing medical education (CME) information for the meeting, including designation and accreditation information, learning objectives, and faculty disclosures, by visiting www.scahq.org/2018echoweek.

How to Claim Your CME
To claim CME credit, visit www.scahq.org/2018echoweek to complete your 2018 Echo Week evaluations and download your CME certificate. You must complete the evaluations by June 1, 2018, to claim credit. The deadline will not be extended.

Echo Week On Demand
Echo Week On Demand is an online library with more than 35 hours of educational content from the meeting. Revisit sessions you attended and participate in those you missed—anytime, anywhere. Plus, earn additional CME credits. Purchase the product onsite for a discounted rate!

Registration
The registration desk will be located outside the Ellington Ballroom during the following hours:

- Sunday, February 25 ................................. 3–7:15 pm
- Monday, February 26 .............................. 6:30 am–5 pm
- Tuesday, February 27 .............................. 6:45 am–4 pm
- Wednesday, February 28 .......................... 6:30 am–5 pm
- Thursday, March 1 ................................. 6:45 am–5:30 pm
- Friday, March 2 ...................................... 6:45–10 am

Networking with Our Exhibitors
Exhibits will be located outside the Ellington Ballroom during the following hours:

- Tuesday, February 27 .............................. 7 am–6:30 pm
- Wednesday, February 28 ........................ 6:30 am–3 pm
- Thursday, March 1 ................................. 7–10 am

All attendees are welcome to join our exhibitors and sponsors on Tuesday evening, 5:30–6:30 pm. Light refreshments will be offered, and attendees will have the opportunity to network with colleagues and industry partners.

Disclaimer
The material presented in this activity represents the opinions of the speakers and not necessarily the views of SCA.

Video Recording
By attending this SCA event, you agree not to record or digitize any parts of the scientific programming.

Photography
Please be advised that throughout the meeting, photos may be taken for use in SCA marketing materials, including the e-newsletter and SCA Facebook and Twitter pages. If you do not consent to be photographed, please advise the SCA staff in writing at info@scahq.org.
PROGRAM COMMITTEE AND FACULTY

Disclosures of Relevant Financial Relationships: Faculty disclosures are available online at www.scahq.org/2018echoweek.

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Your Mobile Meeting

Use your mobile device or computer to access Echo Week materials. Download the 2018 meeting app to create a personalized experience at your fingertips. Search SCA 2018 in your app store or visit www.tripbuildermedia.com/apps/sca to download the app today!
SCHEDULE
Unless otherwise noted, all sessions will take place in Ellington Ballroom.

Sunday, February 25

3–7:15 pm  
Registration Open

5–7 pm  
**Physics Review**  
*Moderator: Mark Taylor, MD*
- 5–5:25 pm  
  Physics: The Essentials *Madhav Swaminathan, MD*
- 5:25–5:50 pm  
  Doppler: The Essentials PW and CW *Nikolaos Skubas, MD*
- 5:50–6:15 pm  
  Doppler: The Essentials Color Flow Doppler *Feroze Mahmood, MD*
- 6:15–6:40 pm  
  Spatial and Temporal Resolution *Gregg Hartman, MD*
- 6:40–7 pm  
  Panel Discussion and Audience Q&A

7–8 pm  
**Echo Week Pretest**  
*Moderator: Feroze Mahmood, MD*

Monday, February 26

**Fundamentals of Perioperative Echocardiography: The Review**

6:30 am–5 pm  
Registration Open

6:45–7:15 am  
Continental Breakfast

7:15–7:30 am  
Overview and Announcements

7:30–9 am  
**Principles of Hemodynamics**  
*Moderator: Mark Taylor, MD*
- 7:30–7:55 am  
  Hemodynamic Principles *Massimiliano Meineri, MD*
- 7:55–8:20 am  
  Hemodynamic Applications—Flow and Shunts *Nikolaos Skubas, MD*
- 8:20–8:45 am  
  Hemodynamic Applications—Valve Analysis *Gregg Hartman, MD*
- 8:45–9 am  
  Panel Discussion and Audience Q&A

9–9:30 am  
Coffee Break

9:30–11:30 am  
**Left Ventricle**  
*Moderator: Fabio Papa, MD*
- 9:30–9:55 am  
  Systology—Global Qualitative and Quantitative Applications *Sheela Pai Cole, MD*
- 9:55–10:20 am  
  Systology—Segmental Analysis and Ischemia *Alexander Mittnacht, MD*
- 10:20–10:45 am  
  Practical Perioperative Diastology *Josh Zimmerman, MD*
- 10:45–11:10 am  
  Comprehensive LV Echocardiographic Analysis—Case-Based Approach *Sharon McCartney, MD*
- 11:10–11:30 am  
  Panel Discussion and Audience Q&A

Join the conversation: #SCA2018EchoWeek
11:30 am-12:30 pm  
**Lunch Provided**  
*Room: Overlook*

12:30-2 pm  
**Right Ventricle**  
*Moderator: Massimiliano Meineri, MD*  
- 12:30–12:55 pm  
  Analysis of RV Anatomy and Function  
  *Kimberly Howard-Quijano, MD*  
- 12:55–1:20 pm  
  Advanced Concepts in RV Function Assessment  
  *Jonathan Mark, MD*  
- 1:20–1:45 pm  
  Comprehensive RV Echocardiographic Analysis—A Case-Based Approach  
  *Alexander Mittnacht, MD*  
- 1:45–2 pm  
  Panel Discussion and Audience Q&A

2–2:30 pm  
**Coffee Break**

2:30–4 pm  
**Principles of Tissue Doppler and Cardiac Kinetics**  
*Moderator: Andrew Maslow, MD*  
- 2:30–2:55 pm  
  Tissue Doppler: Assessment of Tissue Velocity  
  *Nikolaos Skubas, MD*  
- 2:55–3:20 pm  
  Speckle Tracking  
  *Kimberly Howard-Quijano, MD*  
- 3:20–3:45 pm  
  Clinical Applications of Strain  
  *Annette Vegas, MDCM*  
- 3:45–4 pm  
  Panel Discussion and Audience Q&A

4–4:30 pm  
**Break**

4:30–6:30 pm  
**Potpourri**  
*Moderator: Jonathan Leff, MD*  
- 4:30–4:50 pm  
  Atria  
  *Jonathan Mark, MD*  
- 4:50–5:10 pm  
  Vessels  
  *Nelson Burbano, MD*  
- 5:10–5:30 pm  
  Artifacts  
  *Yasdet Maldonado, MD*  
- 5:30–5:50 pm  
  Endocarditis-Anatomical Variants  
  *Andrew Maslow, MD*  
- 5:50–6:10 pm  
  Pericardial Disease  
  *Josh Zimmerman, MD*  
- 6:10–6:30 pm  
  Panel Discussion and Audience Q&A

6:30–7:30 pm  
**Day in Review**  
*Moderator: Peter Panzica, MD*

**Tuesday, February 27**

**Fundamentals of Perioperative Echo: An Interactive Approach**

6:45 am–4 pm  
**Registration Open**

7–7:30 am  
**Continental Breakfast with Exhibitors**
7:30–9 am
**Basic 3D Symposium**
* Moderator: Massimiliano Meineri, MD
  - 7:30–7:50 am Physics of 3D Imaging and Image Formation **Gregg Hartman, MD**
  - 7:50–8:10 am 3D Imaging Modes **Feroze Mahmood, MD**
  - 8:10–8:30 am Introduction to Multiplanar Reformatting **Douglas Shook, MD**
  - 8:30–8:40 am Pro: 3D TEE Superior to 2D TEE Imaging **Madhav Swaminathan, MD**
  - 8:40–8:50 am Con: 3D TEE Is Not Superior to 2D TEE Imaging **Gregg Hartman, MD**
  - 8:50–9 am Panel Discussion and Audience Q&A

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

9:30–11:30 am
**Aortic Valve Symposium**
* Moderator: Mark Taylor, MD
  - 9:30–9:55 am AS—Echocardiographic Quantification **Kimberly Howard-Quijano, MD**
  - 9:55–10:20 am AS—Echocardiographic Quantification of Difficult Subgroups **Mark Taylor, MD**
  - 10:20–10:45 am AS—Current Controversies in Calculation AVA **Madhav Swaminathan, MD**
  - 10:45–11:10 am Aortic Regurgitation **Jonathan Leff, MD**
  - 11:10–11:30 am Panel Discussion and Audience Q&A

11:30 am–12:15 pm
**Prosthetic Valve Symposium I**
* Moderator: Fabio Papa, MD
  - 11:30–11:50 am Prosthetic Valves—Principles of Echocardiographic Visualization **Nelson Burbano, MD**
  - 11:50 am–12:10 pm Hemodynamic Assessment of Prosthetic Valves **George Whitener, MD**
  - 12:10–12:15 pm Panel Discussion and Audience Q&A

12:15–1:15 pm
**Lunch Provided**
Room: Overlook

1:15–3:15 pm
**Mitral Valve Symposium**
* Moderator: Annette Vegas, MDCM
  - 1:15–1:35 pm MR—Quantitative Assessment of Mitral Valve Anatomy **Annette Vegas, MDCM**
  - 1:35–1:55 pm MR—Anatomical Lesion-Based Approach **Sheela Pai Cole, MD**
  - 1:55–2:15 pm MR—Comprehensive Assessment **Madhav Swaminathan, MD**
  - 2:15–2:35 pm MR—Ischemic MR and Indices of Mitral Valve Remodeling **Douglas Shook, MD**
  - 2:35–2:55 pm Mitral Stenosis **Sharon McCartney, MD**
  - 2:55–3:15 pm Panel Discussion and Audience Q&A

3:15–3:45 pm
**Coffee Break with Exhibitors**
3:45–5:30 pm

**Tricuspid and Pulmonic Valve Symposium**

*Moderator: Douglas Shook, MD*

- 3:45–4 pm  
  Tricuspid Valve and Annulus—Quantitative Approach  
  **Yasdet Maldonado, MD**

- 4–4:20 pm  
  TR—Comprehensive Assessment  
  **Andrew Maslow, MD**

- 4:20–4:40 pm  
  TR—Quantitative Assessment with Remodeling  
  **Peter Panzica, MD**

- 4:40–4:55 pm  
  Functional TR in Left-Sided Disease  
  **Massimiliano Meineri, MD**

- 4:55–5:05 pm  
  Tricuspid Stenosis  
  **Annette Vegas, MDCM**

- 5:05–5:15 pm  
  Pulmonic Valve  
  **Jonathan Leff, MD**

- 5:15–5:30 pm  
  Panel Discussion and Audience Q&A

5:30–6:30 pm

**Exhibitor Reception**

6:30–7:30 pm

**Day in Review**

*Moderator: Andrew Maslow, MD*

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**Wednesday, February 28**

**Anatomy and Three-Dimensional Imaging**

6:30 am–5 pm

**Registration Open**

6:30–7:25 am

**Continental Breakfast with Exhibitors**

6:45–7:45 am

**Problem-Based Learning Discussions (PBLDs): How to Manage the Moderates**

*Room: Check the room assignment on the back of your badge.*

PBLDs are limited to 17 participants, and separate paid registration is required. If you have any questions about your room assignment, please visit the Registration Desk. Topics include:

- **Moderate Aortic Stenosis**
- **Moderate Mitral Regurgitation**
- **Moderate Tricuspid Regurgitation**

**PBLD faculty:**

- Nelson Burbano, MD
- Kimberly Howard-Quijano, MD
- Jonathan Leff, MD
- Yasdet Maldonado, MD
- Jonathan Mark, MD
- Sharon McCartney, MD
- Massimiliano Meineri, MD
- Alexander Mittnacht, MD
- Alina Nicoara, MD
- Sheela Pai Cole, MD
- Peter Panzica, MD
- Fabio Papa, MD
- Kent Rehfeldt, MD
- Mark Taylor, MD
- Annette Vegas, MDCM
- George Whitener, MD

8–11 am

**Hands-On Porcine Heart Dissection with 2D and 3D Echocardiographic Correlation: Apply Anatomy and Imaging to Surgical and Structural Heart Decision Making**

*Moderators: Douglas Shook, MD; Matt Maxwell, MD*
11 am–12:30 pm
Lunch Break on Your Own

12:30–2:30 pm
3D Symposium II
Moderator: Feroze Mahmood, MD
12:30–1:05 pm  3D Platforms Douglas Shook, MD
1:05–1:40 pm  Qualitative 3D and Quantitative 3D Stanton Shernan, MD
1:40–2:15 pm  The Essential 3D Exam Kent Rehfeldt, MD
2:15–2:30 pm  Panel Discussion and Audience Q&A

2:30–3 pm
Coffee Break with Exhibitors

3–4 pm
Congenital Symposium
Moderator: Nikolaos Skubas, MD
3–3:25 pm  Adult Congenital I Patrick Flynn, MD
3:25–3:50 pm  Adult Congenital II Patrick Flynn, MD
3:50–4 pm  Panel Discussion and Audience Q&A

4–5 pm
Prosthetic Valve Symposium II
Moderator: Madhav Swaminathan, MD
4–4:20 pm  Annuloplasty Rings (Mitral/Tricuspid/Aortic) Mark Taylor, MD
4:20–4:45 pm  Prosthetic Valve Dysfunction—Case-Based Approach Christopher Troianos, MD
4:45–5 pm  Panel Discussion and Audience Q&A

5–6 pm
Day in Review
Moderator: Feroze Mahmood, MD

6–7 pm
Poster Session with Reception
Room: Overlook

Thursday, March 1

Application of Perioperative Echo: Dilemmas and Cases

6:45 am–5:30 pm
Registration Open

7–7:30 am
Continental Breakfast with Exhibitors
7:30–9:30 am
Decision Making in Mitral Valve Surgery
Moderator: Bruce Bollen, MD
7:30–7:50 am What Does the Surgeon Want to Know? Brad Taylor, MD
7:50–8:10 am What Do I Tell the MV Surgeon? Practical Exam and Assessment Techniques Christopher Troianos, MD
8:10–8:30 am Predicting Repair Success or Failure Andrew Maslow, MD
8:30–8:50 am Post MV Repair—Echo Assessment Alina Nicoara, MD
8:50–9:10 am Ischemic MR—Guidelines and Clinical Dilemmas: A Surgeons Perspective Brad Taylor, MD
9:10–9:30 am Case Presentation with Audience Participation Jacques (Prince) Neelankavil, MD

9:30–10 am
Coffee Break with Exhibitors

10–11:30 am
Decision Making in Aortic Valve Disease
Moderator: Alina Nicoara, MD
10–10:15 am Surgical Implications for Low-Flow Low-Gradient AS Mark Taylor, MD
10:15–10:35 am Quantifying AS in the OR: Which Measurements Should I Rely On? Kent Rehfeldt, MD
10:35–10:55 am Aortic Valve Repair—Surgical Perspective Brad Taylor, MD
10:55–11:10 am New Concepts in Echocardiographic Imaging of the Aortic Valve Stanton Shernan, MD
11:10–11:30 am Case Presentation with Audience Participation Ravi Joshi, MD

11:30 am–Noon
Lunch Provided

Noon–12:45 pm
11th Annual Arthur E. Weyman, MD, Lecture
Moderators: Mark Taylor, MD; Feroze Mahmood, MD
Perioperative Ultrasound From Bedside to 3D: How is the World Changing?
Stanton Shernan, MD

SCA thanks the National Board of Echocardiography (NBE) for its generous support of the annual Weyman Lecture.

12:45–1 pm
Award Presentations

1–2:30 pm
Advanced Clinical Decision Making—Mechanical Support Devices
Moderator: Kent Rehfeldt, MD
1–1:25 pm Role of Echocardiography in VAD Patients Ravi Joshi, MD
1:25–1:45 pm Echocardiography for ECMO Patients Michael Andrawes, MD
1:45–2:15 pm Mechanical Assist Devices—Case-Based Approach Georges Desjardins, MD
2:15–2:30 pm Panel Discussion and Audience Q&A

2:30–3 pm
Coffee Break

3–5 pm
The Heart Team: Structural Heart Disease Symposium I
Moderator: G. Burkhard Mackensen, MD
3–3:20 pm Role of Echo in the Percutaneous MV Repair G. Burkhard Mackensen, MD
3:20–3:40 pm Valve in Valve Therapy Mark Reisman, MD
3:40–4 pm ASD and VSD Closure Devices Georges Desjardins, MD
4–4:20 pm LAA Closure—Echo Involvement Charles Nyman, MBBCh
4:20–4:50 pm Heart Disease Cases I—A Team Approach Georges Desjardins, MD; Alina Nicoara, MD
4:50–5 pm Panel Discussion and Audience Q&A
**5:15–8:15 pm**
**3D Imaging and Laptop Computer Workshop**

*Room: Mercer Ballroom*

This workshop is limited to 90 participants, and separate paid registration is required. The workshop is divided into two 1.5-hour sessions during which 3D decision making will be covered concurrently by faculty experts. Attendees will have a personal laptop assigned to them at each station and will rotate between the two rooms.

Workshop faculty:
- G. Burkhard Mackensen, MD
- Jacques (Prince) Neelankavil, MD
- Alina Nicoara, MD
- Charles Nyman, MBBCh
- Kent Rehfeldt, MD
- Stanton Shernan, MD

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**Friday, March 2**

**Application of Perioperative Echocardiography**

**6:45–10 am**
**Registration Open**

**7–7:30 am**
**Continental Breakfast**

**7:30–9:30 am**
**The Heart Team: Structural Heart Disease Symposium II**

*Moderator: Charles Nyman, MBBCh*

- 7:30–7:45 am  Total Endoscopic Heart Surgery  *Nikolaos Skubas, MD*
- 7:45–8 am  Echo and TAVR—Short-Term and Long-Term Examinations  *Jacques (Prince) Neelankavil, MD*
- 8–8:15 am  Percutaneous Approaches to Tricuspid Valve Disease  *Mark Reisman, MD*
- 8:15–8:30 am  Considerations for Percutaneous Approaches in Complex Mitral Valve Disease  *G. Burkhard Mackensen, MD*
- 8:30–9:15 am  Heart Disease Cases II—A Team Approach  *G. Burkhard Mackensen, MD; Jacques (Prince) Neelankavil, MD; Charles Nyman, MBBCh; Michael Andrawes, MD*
- 9:15–9:30 am  Panel Discussion and Audience Q&A

**9:30–9:45 am**
**Coffee Break**

**9:45 am–12:15 pm**
**Echo Week Post-Test—A Comprehensive Review of Echo Week**

*Moderators: Feroze Mahmood, MD; Peter Panzica, MD*
SCIENTIFIC ABSTRACTS AND POSTERS

To view full details on abstracts, go to scahq.org/2018echoweek.

(EW1) A Novel Approach to Caval Valve Implantation in Patients With Large IVC Diameter
Liliya Pospishil, MD; Teresa Mulaikal, MD

(EW2) Successful ECMO Rescue for Hemopericardium Following TAVR: A TEE-Guided Diagnosis
Thomas Kral, MD; Jessica Tashjian, MD

(EW3) Predicting the Need for Intraoperative Vasactive Use During Transcatheter Aortic Valve Replacement With B-Type Natriuretic Peptide and Left Ventricular Ejection Fraction
Craig Lilie; Morgan Marino, MD; Shawn Schepel, MD; J. Clint Tippett, MD; William Culp, MD

(EW4) Right Atrial Masses—An Unwelcome Guest
Diana Khatib, MD; Nikhil Kumar, MD

(EW5) Repair of an Ascending Aortic Pseudoaneurysm with Percutaneous Amplatzer Closure Device
Patrick Kim, MD; François Béïque

(EW6) TEE Examination of a Patient With Stage IV Angiosarcoma Causing Perforation of Right Coronary Artery and Erosion Into the Pericardium—A Case Report
Paul Dare, MD; Sonia Nhieu

(EW7) Late Migration and Extraction of Embolized Septal Occluder Device to the Right Pulmonary Artery
Mikel Gorbea, MD; Ervant Nishanian, PhD MD; Bessie Kachulis, MD

(EW8) The Evolution of Echocardiographic Type and Anesthetic Technique for Transcatheter Aortic Valve Replacement Procedure at a Single High-Volume Center
Morgan Marino, MD; Craig J. Lilie, MD; Shawn Schepel, MD; William Culp, MD; J. Clint Tippett, MD

(EW9) The Treatment of Symptomatic, Severe Tricuspid Regurgitation With the MitraClip System
Patrick Hussey, MD; Isaac Wu, MD

(EW10) Jellyfish-Like Accessory Mitral Valve Leaflet as Cause of Cerebrovascular Accident
Orlando Suero, MD; Zahra Malik, MD

(EW11) A Dissection Flap With an Attitude—Acute Type A Aortic Dissection With Severe Aortic Regurgitation
Jin Jung, MD; Stephanie Tran, MD; Timothy Pawelek; Ovidiu Moise, MD

(EW12) Ruptured Chordae Tendineae With Torrential Mitral Regurgitation
David Vu, MD; Ovidiu Moise, MD; Stephanie Tran, MD; Warren Choi, MD

(EW13) Left Atrial Myxoma Resection With Post-Cardiopulmonary Bypass Left Ventricular Failure Requiring Intra-Aortic Balloon Pump
Daryl Banton, MD; Adam Lichtman, MD FASE

(EW14) RVOT Compression by a Retrosternal Hematoma Mimicking an Intracardiac Mass
Thomas Kral, MD; Matthew K. Cirigliano

(EW15) Right-Heart Compression From Cephalad Displacement of the Diaphragm: A Surprising Cause of Instability After Induction of General Anesthesia
Yefim Vilnits, MD; Steve Miller, MD

(EW16) Aortic Air After Conversion From Cardiopulmonary Bypass to Veno-Arterial Extracorporeal Membrane Oxygenation
Austin Pulliam, MD; Kimberly Nicol, DO

(EW17) Unroofed Coronary Sinus Complicates Coronary Artery Bypass Grafting Operation
Gina Brown, MD
COMMERCIAL SUPPORT

SCA would like to thank the following companies for providing an educational grant and/or in-kind support for the hands-on workshop:

- Abbott/St. Jude Medical, Inc.
- Boston Scientific Corporation
- Edwards Lifesciences LLC
- Medtronic, Inc.
- TOMTEC
- GE Healthcare
  (in-kind workshop equipment)
- Philips
  (in-kind workshop healthcare equipment)

EXHIBITORS

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Aventic LLC ......................................................... Table 6
CS Medical—AirClean Systems .......................................... Table 16
Fore-Sight ......................................................... Table 4
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National Board of Echocardiography, Inc. ............................. Table 15
Philips Medical Systems ............................................... Table 17
Siemens Healthineers ................................................... Table 3
You cannot fix what you cannot find. Identifying the extent and location of mitral valve leakage is vital to a successful clinical outcome. Additionally, a faster and more accurate diagnosis can help to reduce clinical complications, potentially improving operating room efficiency and reducing length of stay.

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