

# STS 54th Annual Meeting

**Program Guide** 

Fort Lauderdale, Florida

January 27-31, 2018



## The Society of Thoracic Surgeons gratefully acknowledges the following companies for providing educational grants for the STS 54th Annual Meeting.

#### **Platinum Benefactors**

Provided \$50,000 or above

Abbott

Medtronic

#### **Silver Benefactors**

Provided \$10,000-\$24,999

Ethicon

Getinge Group

St Jude Medical

#### **TABLE OF CONTENTS**

Meeting Logistics
Convention Center Maps
Program at a Glance
STS/AATS Tech-Con 2018 Program Outline
Saturday, January 2717
STS 54th Annual Meeting Program Outline23
Sunday, January 28
Monday, January 29
Tuesday, January 30
Wednesday, January 31 / STS University
Exhibitor Listing
Society Information
STS Board of Directors
STS Committees, Councils & Workforces
STS-PAC Board of Advisors
The Annals of Thoracic Surgery Editorial Board 98
STS Representatives & Contacts
Past Meetings & Leadership
Honorary Members, Award Recipients
& Featured Lecturers114
The Thoracic Surgery Foundation
Program Participant Index 121

The information in this Program Guide is accurate as of December 13, 2017.

#### **ACCREDITATION STATEMENTS**

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

#### STS 54th Annual Meeting

The Society of Thoracic Surgeons designates this live activity for a maximum of 26.75 *AMA PRA Category 1 Credits*<sup>TM</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The Society of Thoracic Surgeons has been approved by the American Board of Cardiovascular Perfusion to award 31.7 Category I CEUs for this activity.

#### STS 54th Annual Meeting Online

The Society of Thoracic Surgeons designates this enduring material for a maximum of 107.75 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Continuing medical education credit will not be provided for STS/AATS Tech-Con.

#### 2018 MEETINGS APP

The STS Meetings app makes it easy to plan your schedule while in Fort Lauderdale. Browse the educational program, save favorite sessions/ presentations to your custom itinerary, take notes during lectures, read scientific abstracts, and learn more about the exhibitors. You also can complete meeting evaluations, claim CME/Perfusion CEU credit, and request a certificate of attendance. The app updates in real-time, so you'll always have the latest information at your fingertips. Access the app by searching for "STS Meetings" in the Apple App Store or Google Play or by scanning the QR code below with your smartphone. The STS Meetings app is supported by Medtronic through a branding opportunity.



#### **ABSTRACT BOOK**

The STS 54th Annual Meeting Abstract Book is available online only; printed copies will not be distributed this year. To read the scientific abstracts, visit www.sts.org/abstractbook. Abstracts also are available within the STS Meetings app (see above).

#### **ANNALS MANUSCRIPT SUBMISSION**

Each abstract that is presented orally or as a poster during the STS 54th Annual Meeting must be submitted before or at the time of the meeting to *The Annals of Thoracic Surgery* for publication consideration. Manuscripts must be submitted via *The Annals* online manuscript tracking system (www.editorialmanager.com/annals) by Wednesday, January 31, 2018, 11:59 pm, Eastern Standard Time. For more information, including requests for waivers, see page 12 of the *STS 54th Annual Meeting Abstract Book* (available online at www.sts.org/abstractbook).

#### ANNUAL MEETING ONLINE

Access to the STS 54th Annual Meeting Online is **included** with Annual Meeting registration. With such a full meeting schedule, it's impossible to attend every presentation of interest. This web-based video presentation will let you earn CME credit for sessions you were unable to attend—or review sessions of special interest—in the comfort of your home or office. This activity also provides self-assessment credits toward Part 2 of the American Board of Surgery Maintenance of Certification Program. The Online product will be available approximately 1 month after the conclusion of the Annual Meeting and will be accessible for up to a year. Visit www.sts.org/amonline to learn more.

#### **BUSINESS CENTER**

The Business Center is located near Registration on the first floor of the convention center and provides packing and shipping services, copying, faxing, and office supplies.

Saturday, January 27	7:00 AM - 1:00 PM
Sunday, January 28	7:00 AM - 1:00 PM
Monday, January 29	8:00 AM - 5:00 PM
Tuesday, January 30	8:00 AM - 5:00 PM
Wednesday, January 31	8:00 AM - 5:00 PM

#### **MEETING LOGISTICS**

#### **CAREER FAIR**

Make sure to stop by the STS/CTSNet Career Fair, which will give you the chance to meet face-to-face with top employers. Recruiters will be available to talk with you about career opportunities. The Career Fair will be held in the Exhibit Hall.

Sunday, January 28	4:30 PM - 6:30 PM
Monday, January 29	9:00 AM - 4:30 PM
Tuesday, January 30	9:00 AM - 3:30 PM

#### **COAT & LUGGAGE CHECK**

Complimentary coat and luggage check is available near Registration on the first floor of the convention center.

Saturday, January 27	<b>6:30</b> AM <b>- 6:30</b> PM	
Sunday, January 28	6:30 AM - 6:30 PM	
Monday, January 29	6:30 AM - 6:30 PM	
Tuesday, January 30	6:30 AM - 5:30 PM	
Wednesday, January 31	6:30 AM - 11:30 AM	

#### **CONTINUING MEDICAL EDUCATION CREDIT**

The STS 54th Annual Meeting utilizes an entirely electronic evaluation and CME/Perfusion CEU credit claim process. Both physicians and perfusionists can use this system to claim credit, complete evaluations, and print CME/Perfusion CEU certificates. Certificates of Attendance also are available for other attendees and international physicians not wishing to claim CME/Perfusion CEU credit. Attendees will not be able to evaluate and claim CME/Perfusion CEU credit for ticketed sessions unless they have registered for those sessions. Please note that CME credit is not available for the Residents Symposium, Residents Luncheon, or STS/AATS Tech-Con 2018.

Attendees can complete the overall meeting evaluations and all individual session evaluations onsite at CME Stations located in the Grand Ballroom Foyer and the Floridian Ballroom Foyer. Certificate printing is available.

Attendees also can complete evaluations and claim credit by visiting www.sts.org/2018evaluation or using the STS Meetings app. In order to make this process more convenient for attendees, the meeting evaluations will be available online through Monday, February 12, 2018.

Attendees can log in to the website with the following information:

- Username: 6-digit STS member ID number printed on the upper right corner of their meeting badge
- · Password: First initial and last name

#### **DINING OPTIONS**

Four \$5 coupons, good for purchasing food and beverage items from the concession stands located in the Exhibit Hall, were provided with your badge. Two coupons can be used on Monday, and the others can be used on Tuesday. The concession stands will be open:

Monday, January 29	11:30 AM - 2:00 PM
Tuesday, January 30	11:30 AM - 2:00 PM

Complimentary hors d'oeuvres and refreshments will be available during the Sunday Opening Reception, and coffee will be available at scheduled breaks on Monday and Tuesday in the Exhibit Hall. See the Program at a Glance on page 11 for details on break times.

A retail coffee bar is located in the Floridian Ballroom Foyer and will be open daily at 6:30 Am.

#### **EXHIBIT HALL**

This year, the STS Exhibit Hall plays host to more than 100 companies showcasing the latest in cardiothoracic surgery products and technology. Don't miss the Opening Reception on Sunday at 4:30 PM in the Exhibit Hall. Hors d'oeuvres and refreshments will be offered throughout the Hall during the reception.

Sunday, January 28	<b>4:30</b> рм – <b>6:30</b> рм
Monday, January 29	9:00 AM - 4:30 PM
Tuesday, January 30	9:00 AM - 3:30 PM

#### **FIRST AID**

First aid services are available on the first floor of the convention center. Please proceed to Central Security on the north end of the building.

Thursday, January 25	8:00 AM - 5:00 PM
Friday, January 26	8:00 AM - 6:00 PM
Saturday, January 27	7:30 AM - 6:30 PM
Sunday, January 28	7:30 AM - 6:30 PM
Monday, January 29	6:30 AM - 6:30 PM
Tuesday, January 30	6:30 AM - 5:30 PM
Wednesday, January 31	6:30 AM - 12:00 PM

#### **LEARNING LAB SCHEDULE**

Exhibiting companies and others will present talks and demonstrations in the Learning Lab Theater, located in the Exhibit Hall.

#### Sunday, January 28

4:45 PM - 5:55 PM

STS Jeopardy Championship

#### Monday, January 29

10:55 ам – 11:25 ам

Abbott: Transseptal Access for Transcatheter Mitral Procedures: Surgeons Can Master This Too!

12:45 рм – 1:15 рм

AngioDynamics: The AngioVac System: When Is It the Device of Choice?

#### Tuesday, January 30

10:15 Am - 10:45 Am

Ethicon: The Science of Tissue Management with Johnson & Johnson Medical Devices Companies

#### **LOOKING TO THE FUTURE**

The STS Looking to the Future Scholarship Program was developed to identify and encourage general surgery residents who are considering, but not yet committed to, a career in cardiothoracic surgery. This year, 30 medical students and 30 general surgery residents were awarded scholarships to attend the STS 54th Annual Meeting. A number of events for the scholarship winners are being held during the Annual Meeting, including:

#### STS Looking to the Future Scholarship Medical Student Reception

Saturday, January 27, 5:00 pm – 7:00 pm Atlantic Ballroom I, Hilton Fort Lauderdale Marina

#### STS Looking to the Future Scholarship Medical Student Program

Sunday, January 28, 8:00 AM – 1:00 PM Room 220, Greater Fort Lauderdale/Broward County Convention Center

## STS Looking to the Future and Women in Thoracic Surgery Scholarship Reception

Sunday, January 28, 5:30 pm — 6:30 pm Atlantic Ballroom I–II, Hilton Fort Lauderdale Marina

#### STS Looking to the Future Scholarship Resident Program

Tuesday, January 30, 3:00 pm – 4:15 pm Room 222, Greater Fort Lauderdale/Broward County Convention Center

#### **LOST & FOUND**

Lost items may be claimed at the Information Booth near Registration. After the meeting, all unclaimed items will be discarded.

#### **NURSING/LACTATION ROOM**

Facilities for nursing mothers are available in Room 213 and will be open during all registration hours.

#### PHOTOGRAPHY AND VIDEO RECORDING POLICY

Photography and video recording of STS/AATS Tech-Con 2018 sessions are strictly prohibited, except by authorized personnel. Video recording of STS 54th Annual Meeting sessions is strictly prohibited, except by authorized personnel.

#### PRESIDENT'S RECEPTION

Network with STS surgeon leaders and fellow meeting attendees at the President's Reception on Sunday evening, January 28. This high-profile event will be held on an oceanfront terrace at the luxurious Fort Lauderdale Marriott Harbor Beach Resort & Spa. While a tropical-themed band plays in the background, enjoy gourmet food stations and an open bar. Colorful tropical birds will be on hand to help set the mood. This reception takes the place of the STS Social Event, which previously had been held on Monday evening, leaving the night open for industry-sponsored events or socializing with your colleagues. Tickets can be purchased at Registration for \$95. Don't miss this opportunity to connect with leaders in cardiothoracic surgery in a picturesque, informal setting.

#### REGISTRATION

Attendee and exhibitor registration is located in the Atrium Lobby on the first floor of the convention center.

Friday, January 26	<b>3:00</b> рм – <b>6:00</b> рм
Saturday, January 27	<b>6:30</b> AM - <b>6:00</b> PM
Sunday, January 28	<b>7:00</b> AM - <b>6:30</b> PM
Monday, January 29	<b>6:30</b> AM - <b>5:00</b> PM
Tuesday, January 30*	6:30 AM - 4:30 PM
Wednesday, January 31*	6:30 AM - 9:30 AM

<sup>\*</sup>Exhibitor registration ends at 3:00 PM on Tuesday.

Badges must be worn at all times and are required for admission to scientific sessions and the STS Exhibit Hall. STS/AATS Tech-Con 2018 and the STS 54th Annual Meeting require separate registration.

Tech-Con registration provides access only to the educational sessions on Saturday, January 27. Annual Meeting registration provides access only to the educational sessions on Sunday, January 28, Monday, January 29, and Tuesday, January 30. You also will receive complimentary access to Annual Meeting Online.

You also may purchase separate tickets to attend the President's Reception (Sunday evening, January 28) and STS University courses (Wednesday, January 31).

#### SATELLITE ACTIVITIES

Satellite activities are programs offered by industry and held in conjunction with the STS 54th Annual Meeting. They are not developed or sponsored by STS.

#### Monday, January 29

#### Abbott

Hemodynamics Matter for Exercise Reserve, Left Ventricular Mass Regression, and Durability 7:00 pm - 10:00 pmHilton Fort Lauderdale Marina, Grand Ballroom E 1881 SE 17th St

#### AtriCure/MediaSphere Medical

Concomitant Surgical Ablation of Atrial Fibrillation: Navigating Controversies and Growing Your Practice 7:00 рм – 9:00 рм

Fort Lauderdale Marriott Harbor Beach Resort & Spa, Caribbean V 3030 Holiday Dr

#### Baxter

Challenge the Burden of Bleed: Discussing the Clinical Utility of an FDA-Accepted Bleeding Severity Scale (VIBe SCALE [Validated Intraoperative Bleeding Scale])

7:00 рм - 9:00 рм

Hilton Fort Lauderdale Marina, Atlantic Ballroom 2 1881 SE 17th St

#### **Edwards Lifesciences**

Latest Innovations in Surgical Aortic Valve Replacement 7:00 pm - 10:00 pmHilton Fort Lauderdale Marina, Grand Ballroom D 1881 SE 17th St

#### MEETING LOGISTICS

#### Tuesday, January 30

#### **Thompson Surgical**

Optimal Exposure for Mitral Valve Surgery: If You Can't See It, You Can't Fix It 6:00 am – 7:30 am Hilton Fort Lauderdale Marina, Grand Ballroom ABCD 1881 SE 17th St

#### **SCIENTIFIC POSTERS**

Scientific posters are located in the Third Floor Concourse and will be available from 2:00 pm on Sunday, January 28, through 5:00 pm on Tuesday, January 30.

Also, join your colleagues at the Scientific Posters and Wine event, 5:15 pm to 6:30 pm on Monday, January 29, in the Floridian Ballroom Foyer, for a moderated review of select scientific posters.

#### **SOCIAL MEDIA**

Follow STS on social media to stay on top of Annual Meeting news, and share your meeting experience using the hashtag #STS2018. Your posts could be featured in the STS Meeting Bulletin!

- The Society of Thoracic Surgeons (STS)
- @STS\_CTSurgery
- @ @thesocietyofthoracicsurgeons

#### **SPEAKER READY ROOM**

The Speaker Ready Room is located in Rooms 317-318. All presenters must report to the Speaker Ready Room at least 24 hours prior to their scheduled presentation time to upload their PowerPoint into the presentation system.

#### STS-PAC RECEPTION

Join Society surgeon and staff leaders on Monday, January 29, for a special reception in support of STS-PAC, the only political action committee that exclusively represents cardiothoracic surgeons. The reception will be held from 6:30 pm to 7:30 pm in the lobby of the Hilton Fort Lauderdale Marina. This event is open to US members of STS who contribute to STS-PAC in 2018. Contributions will be accepted at the event.

#### STS BOOTH

The STS booth (#807) in the Exhibit Hall offers a one-stop shop for all things STS. Attendees can learn about advocacy efforts, membership benefits, STS National Database initiatives, STS Public Reporting, upcoming educational programs, The Thoracic Surgery Foundation, research opportunities, and more. Staff from *The Annals of Thoracic Surgery* also will be available to help authors with manuscript submissions, accessing *Annals* CME activities, and improving figures in manuscripts.

#### **STS UNIVERSITY LECTURES**

STS University courses feature only hands-on learning. No didactic lectures will be given during the activity, so attendees are encouraged to access the lectures online prior to Wednesday morning. You can access the lectures at the STS University viewing station located in the Floridian Ballroom Foyer. You also can access them from your own computer or handheld device by visiting www.sts.org/stsuniversity or using the STS Meetings app.

#### **TRANSPORTATION**

Complimentary shuttle service will be provided between all official STS hotels and the convention center beginning Friday, January 26. The shuttles will operate every 20-30 minutes.

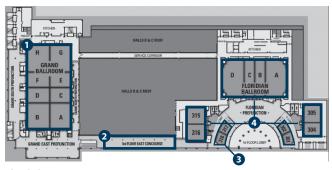
Friday, January 26	2:45 PM - 6:15 PM
Saturday, January 27	<b>6:15</b> AM <b>- 6:45</b> PM
Sunday, January 28	<b>6:45</b> AM - <b>6:45</b> PM
Monday, January 29	<b>6:15</b> AM - <b>6:45</b> PM
Tuesday, January 30	6:15 AM - 5:45 PM
Wednesday, January 31	6:15 AM - 11:45 AM

Times subject to change. Please see the schedule in each hotel's lobby for the most up-to-date information.

#### **WIRELESS INTERNET**

Complimentary wireless internet, supported by Medtronic, is available in the common areas and meeting rooms of the Convention Center for all STS Annual Meeting attendees. To connect to the wireless internet, select "STS 2018" from the available networks. Launch a web browser and follow the instructions to connect, entering password "Medtronic1" when prompted; the password is case sensitive.

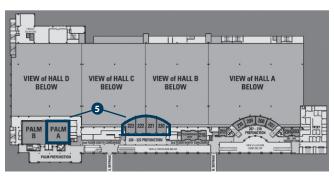
#### CONVENTION CENTER MAPS



#### **Third Floor**

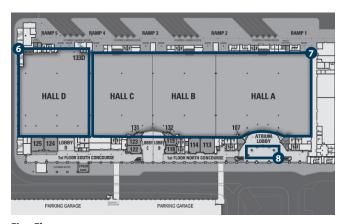
- 1 Tech-Con & General Session
- 2 Posters

- 3 Speaker Ready Room
- Parallel Sessions



#### **Second Floor**

Sessions



#### **First Floor**

- 6 STS University
- 8 Registration

#### **FRIDAY, JANUARY 26**

3:00 PM - 6:00 PM

Registration

#### **SATURDAY, JANUARY 27**

6:30 AM - 6:00 PM

#### Registration

7:00 AM - 6:30 PM

#### **Tech-Con Exhibits**

7:00 AM - 8:00 AM

#### **BREAKFAST—Visit Tech-Con Exhibits**

8:00 AM - 9:30 AM

- Tech-Con Adult Cardiac Track I: Innovations in Aortic Valve and Aortic Aneurysm Management
- Tech-Con General Thoracic Track I: Emerging and/or Game-Changing Technologies in the Management of Lung Cancer

9:30 AM - 10:15 AM

#### **BREAK—Visit Tech-Con Exhibits**

10:15 AM - 12:00 PM

- Tech-Con Adult Cardiac Track II: Cutting-Edge Surgery for Heart Failure and Coronary Artery Disease
- (ii) Tech-Con General Thoracic Track II: Emerging and/or Game-Changing Technologies in the Management of Esophageal Diseases

12:00 PM - 1:00 PM

#### **LUNCH—Visit Tech-Con Exhibits**

1:00 PM - 2:30 PM

- Tech-Con Adult Cardiac Track III: Contemporary and Future Mitral Valve and Atrial Fibrillation Practice
- Tech-Con General Thoracic Track III: Emerging and/or Game-Changing Minimally Invasive Surgery and Other Technologies

2:30 PM - 3:00 PM

#### **BREAK—Visit Tech-Con Exhibits**

3:00 PM - 5:00 PM

Tech-Con Joint Session: Robotic Cardiothoracic Innovations and Substantial "Experies" (Shark Tank"—Rapid-Fire Pitches of Revolutionary Technology

5:00 PM - 6:30 PM

#### **Tech-Con Reception**



#### **SUNDAY, JANUARY 28**

7:00 AM - 6:30 PM

#### Registration

8:00 AM - 12:00 PM

🕜 Adult Congenital Heart Disease Symposium: Surgical Management of Hypertrophic Cardiomyopathy and Anomalous Aortic Origin of a **Coronary Artery in Children and Adults** 

#### **Practice Management Summit**

- STS/AATS Critical Care Symposium: When Things Go Wrong in the CTICU and What to Do About It
- CHEST @ STS: Advanced Bronchoscopy and Surgical Airway **Symposium**

SCA @ STS: Integrating Perioperative Echocardiography Into Cardiac **Surgical Clinical Decision Making** 

8:00 AM - 4:00 PM

#### **Multidisciplinary Innovations in Cardiothoracic Patient Care**

10:00 AM - 4:30 PM

#### "My Tube" Adult Cardiac How-To Video Session

12:00 PM - 1:00 PM

#### **BREAK**

1:00 PM - 4:00 PM

Residents Symposium: Transitioning From Residency to a Successful **Practice** 

1:00 PM - 4:30 PM

How-To Video Session: Technical Tips to Avoid Pitfalls and Simplify **Congenital and Pediatric Cardiac Surgical Procedures** 

How-To Video Session: Tips and Tricks to Maximize Efficiency in Minimally Invasive General Thoracic Surgery

2:00 PM - 6:30 PM

#### Scientific Posters

4:30 PM - 6:30 PM

#### **Opening Reception in STS Exhibit Hall**

7:00 PM - 10:00 PM

President's Reception



#### **MONDAY, JANUARY 29**

6:30 AM - 5:00 PM

Registration

9:00 AM - 4:30 PM

**Exhibit Hall** 

**Scientific Posters** 

7:00 AM - 7:15 AM

**Opening Remarks** 

7:15 AM - 8:15 AM

J. Maxwell Chamberlain Memorial Papers

8:15 AM - 9:00 AM

**Abstract Presentations** 

9:00 AM - 9:40 AM

**BREAK**—Visit Exhibits and Scientific Posters

Complimentary coffee available in the Exhibit Hall

9:40 AM - 9:50 AM

Introduction of the President: Keith S. Naunheim

9:50 AM - 10:50 AM

Presidential Address: Richard L. Prager

10:50 AM - 11:30 AM

**BREAK**—Visit Exhibits and Scientific Posters

Complimentary coffee available in the Exhibit Hall

11:30 AM - 12:30 PM

**Adult Cardiac: Arrhythmia/Atrial Fibrillation** 

Basic Science Research: Adult Cardiac
Basic Science Research: General Thoracic

**Congenital: Adult Congenital** 

**Critical Care** 

Diversity and Inclusion in Cardiothoracic Surgery: What's In It for

🕜 Me?

**General Thoracic: New Technology** 

STS/CATS/CSCS: Difficult Decisions in Thoracic Surgery—Advice From Canadian and American Experts

12:30 рм - 1:30 рм

**BREAK**—Visit Exhibits and Scientific Posters



#### PROGRAM AT A GLANCE

1:15 PM - 5:15 PM

#### Clinical Scenarios: Cardiologists and Surgeons Working Together

1:30 PM - 3:30 PM

**Adult Cardiac: Aorta I** 

**Adult Cardiac: Ischemic** 

Congenital: Pediatric Congenital I General Thoracic: Lung Cancer I

**General Thoracic: Lung Transplantation** 

International Symposium: Confronting Infectious Diseases in Young Adults Undergoing Cardiac Surgery

SVS @ STS: Sharing Common Ground for Cardiovascular Problems

3:30 PM - 4:15 PM

**BREAK**—Visit Exhibits and Scientific Posters

Complimentary coffee available in the Exhibit Hall

4:15 PM - 5:15 PM

**Adult Cardiac: VAD Transplant/ECMO** 

**Ethics Debate: Neighborly Help or Itinerant Surgery?** 

**Research Using the STS National Database** 

**STS Key Contacts: Advocates for Cardiothoracic Surgery** 

The Annals Academy: Preparation and Interpretation of National

**Database Research** 

The Importance of Physician Documentation in Reimbursement

Women in Thoracic Surgery: How to Successfully Implement Surgical Innovations and New Technologies Into Practice

5:15 pm - 6:30 pm

**Scientific Posters and Wine** 

5:30 PM - 6:30 PM

**Business Meeting (STS Members Only)** 

#### **TUESDAY, JANUARY 30**

6:30 AM - 4:30 PM

Registration

9:00 AM - 3:30 PM

**Exhibit Hall** 

9:00 AM - 5:00 PM

**Scientific Posters** 



7:30 AM - 8:30 AM

#### **Meet the Experts Sessions**

7:30 AM - 8:30 AM

## Health Policy Forum: The Changing Medicare Quality Reporting and Payment Landscape

9:00 AM - 10:00 AM

#### **Thomas B. Ferguson Lecture**

10:00 AM - 10:45 AM

#### **BREAK**—Visit Exhibits and Scientific Posters

Complimentary coffee available in the Exhibit Hall

10:45 AM - 11:00 AM

#### **Award Presentations**

11:00 AM - 12:00 PM

#### C. Walton Lillehei Lecture

12:00 PM - 1:00 PM

#### **BREAK**—Visit Exhibits and Scientific Posters

#### Residents Luncheon

1:00 PM - 3:00 PM

#### **Adult Cardiac: General**

#### **Adult Cardiac: Mitral and Tricuspid Valves**

Congenital: Pediatric Congenital II

## **EACTS** @ STS: Bicuspid Aortic Valve Repair With Aortic Valve Insufficiency and Proximal Aortic Aneurysm Repair

STS/ISHLT Joint Symposium: LVAD Therapy in 2018—Worldwide Perspectives

**General Thoracic: Lung Cancer II** 

#### **General Thoracic: Mediastinal/Pulmonary**

1:00 PM - 5:30 PM

#### Patient Safety Symposium: Biases and Errors—Why We Do What We Do

3:00 PM - 3:30 PM

#### **BREAK**—Visit Exhibits and Scientific Posters

Complimentary coffee available in the Exhibit Hall

3:30 PM - 4:30 PM

#### **Cardiothoracic Surgical Education**

#### **PROGRAM AT A GLANCE**

3:30 PM - 5:30 PM

**Adult Cardiac: Aorta II** 

**Adult Cardiac: Aortic Valve/Novel Technologies** 

**Advanced Therapies for End-Stage Cardiopulmonary Disease** 

**Congenital: Pediatric Congenital III** 

ESTS @ STS: Controversial Issues in General Thoracic Surgery—

**Perspectives From Europe and North America** 

**General Thoracic: Esophageal** 

4:30 PM - 5:30 PM

**Quality Improvement** 

#### **WEDNESDAY, JANUARY 31**

6:30 AM - 9:30 AM

**Registration & Breakfast** 

7:00 AM - 9:00 AM

STS University

9:30 AM - 11:30 AM

STS University (courses repeated)

Please note that Tech-Con registration is separate from Annual Meeting registration. Continuing medical education (CME) credit will not be offered for Tech-Con programming.

Photography and recording of Tech-Con sessions are strictly prohibited, except by authorized personnel.

#### **FRIDAY, JANUARY 26**

3:00 PM - 6:00 PM

Atrium Lobby, First Floor

Registration

#### **SATURDAY, JANUARY 27**

6:30 AM – 6:00 PM Atrium Lobby, First Floor

Registration

7:00 AM – 6:30 PM Grand Ballroom Foyer

**Tech-Con Exhibits** 

7:00 AM – 8:00 AM Grand Ballroom Foyer

**BREAKFAST—Visit Tech-Con Exhibits** 

8:00 AM – 9:30 AM Grand Ballroom C-H

Adult Cardiac Track I: Innovations in Aortic Valve and Aortic Aneurysm Management

Moderators: Edward P. Chen, Atlanta, GA, and Nimesh Desai, Philadelphia, PA

8:00 AM Overview: Current Challenges in Aortic and Endovascular

Surgery

Nimesh Desai, Philadelphia, PA

8:04 AM A Practical Approach to Aortic Valve Repair

Emmanuel Lansac, Paris, France

8:12 AM Sutureless Aortic Valve Replacement: Prosthesis Selection

and Challenging Scenarios
Malak Shrestha, Hanover, Germany

8:20 AM Submitted Presentation: Bioprosthetic Valve Fracture

to Facilitate Valve-in-Valve Transcatheter Aortic Valve

Replacement (TAVR)

Keith B. Allen, Kansas City, MO

8:28 AM Navigating Complex TAVR Scenarios: Managing Left

**Ventricular Outflow Tract Calcium, Isolated Aortic** 

Insufficiency, Bicuspid Valve, and Others

Arash Salemi, New York, NY

8:36 AM Panel Discussion

8:47 AM Submitted Presentation: Advanced Aortic Root Surgery

**Techniques via Right Minithoracotomy** 

Joseph Lamelas, Houston, TX

8:55 AM Endovascular Repair in the Ascending Aorta: Is Endo

**Bentall a Reality?** 

Ali Khoynezhad, Los Angeles, CA

#### STS/AATS TECH-CON

9:03 AM Frozen Elephant Trunk and Evolving Arch Surgery Techniques

Eric E. Roselli, Cleveland, OH

9:11 AM Branched Endografting Techniques in the Arch and

Thoracoabdominal Aorta Himanshu J. Patel, Ann Arbor, MI

9:19 AM Panel Discussion

8:00 AM - 9:30 AM

**Grand Ballroom A-B** 

General Thoracic Track I: Emerging and/or Game-Changing Technologies in the Management of Lung Cancer

Moderator: Lisa M. Brown, Sacramento, CA

8:00 AM Submitted Presentation: Electromagnetic Navigational Video-Assisted Thoracoscopic Surgery (N-VATS) for Precision-Guided Resection of Intrathoracic Lesions

Wissam Raad, New York, NY

8:12 AM Submitted Presentation: 3D Computed Tomography Reconstruction and Mix Reality for Sublobar Resection

Xinghua Cheng, Shanghai, China

8:24 AM Submitted Presentation: Robotic Bronchoscopy

Kazuhiro Yasufuku, Toronto, Canada

8:36 AM Use of Ultrasound Imaging for Localizing Nodules Robotically

John F. Lazar, Mechanicsburg, PA

8:48 AM Radiofrequency Ablation of Lung Tumors

Katie S. Nason, Pittsburgh, PA

9:00 AM Cryoablation: Update on SOLSTICE Study—Is It Applicable

to Primary Lung Cancer?

Matthew R. Callstrom, Rochester, MN

9:12 AM Energy Sources for Pulmonary Resection

Moishe A. Liberman, Montreal, Canada

\_\_\_\_\_

**Grand Ballroom Foyer** 

**BREAK**—Visit Tech-Con Exhibits

10:15 AM - 12:00 PM

9:30 AM - 10:15 AM

**Grand Ballroom C-H** 

Adult Cardiac Track II: Cutting-Edge Surgery for Heart Failure and Coronary Artery Disease

Moderators: Arash Salemi, New York, NY, and John M. Stulak, Rochester, MN

10:15 AM Overview: Current Challenges in Heart Failure and Coronary Artery Disease (CAD)

Arash Salemi, New York, NY

10:19 AM HeartMate 3 Clinical Trial Update

Chris T. Salerno, Carmel, IN

10:27 AM PREVENT II: Rationale and Trial Study Design

TBD

10:35 AM Thoracotomy Implant of HeartWare HVAD: HVAD LATERAL

Study

Simon Maltais, Rochester, MN





	10:43 ам	Total Artificial Heart Clinical Trial Update Francisco A. Arabia, Los Angeles, CA
	10:51 ам	$\label{lem:lemocompatibility} \textbf{Hemocompatibility of Fully Magnetically Levitated Pumps} \\ \textit{Nir Uriel, Chicago, IL} \\$
	10:59 AM	Panel Discussion
	11:07 ам	Submitted Presentation: EpicHeart $^{\text{TM}}$ Soft Robotic Device to Support Heart Function William C. Altman, Houston, $TX$
	11:15 ам	Submitted Presentation: First-in-Human Clinical Trial of a Minimally Invasive Left Ventricular Assist Device Valluvan Jeevanandam, Chicago, IL
	11:23 ам	Coronary Artery Bypass Grafting (CABG) or Percutaneous Coronary Intervention for Ischemic Cardiomyopathy David P. Taggart, Oxford, United Kingdom
	11:31 ам	External Stent for Saphenous Vein Grafts in CABG David P. Taggart, Oxford, United Kingdom
	11:39 ам	Robotic-Assisted Totally Endoscopic Coronary Artery Bypass for Multivessel CAD: Beyond Most Surgeons' Reach? Husam H. Balkhy, Chicago, IL
	11·47 AM	Panel Discussion
	11:47 ам	Panel Discussion
	10:15 AM - 1	12:00 PM Grand Ballroom A-B
(ME)	10:15 AM - 1 General T	
CME	10:15 AM – 1 General T Technolog	12:00 PM Grand Ballroom A-B horacic Track II: Emerging and/or Game-Changing gies in the Management of Esophageal Diseases s: Melanie A. Edwards, St Louis, MO, and James D. Luketich,
<u>CME</u>	10:15 AM – 1 General T Technolog Moderator	12:00 PM Grand Ballroom A-B horacic Track II: Emerging and/or Game-Changing gies in the Management of Esophageal Diseases s: Melanie A. Edwards, St Louis, MO, and James D. Luketich,
(ME)	10:15 AM - 1 General T Technolog Moderator Pittsburgh,	I 2:00 PM Grand Ballroom A-B horacic Track II: Emerging and/or Game-Changing gies in the Management of Esophageal Diseases ss: Melanie A. Edwards, St Louis, MO, and James D. Luketich, PA Endoscopic Approach to Zenker's Diverticulum
(MÊ	10:15 AM - 1 General T Technolog Moderator Pittsburgh, 10:15 AM	Description of the Management of Esophageal Diseases in the Management of Esophageal Diseases is: Melanie A. Edwards, St Louis, MO, and James D. Luketich, PA  Endoscopic Approach to Zenker's Diverticulum Ryan M. Levy, Pittsburgh, PA  Update on Advances in Antireflux Surgery
CME	10:15 AM – 1 General T Technolog Moderator Pittsburgh, 10:15 AM 10:30 AM	Description of Esophageal Leaks  Grand Ballroom A-B  horacic Track II: Emerging and/or Game-Changing gies in the Management of Esophageal Diseases s: Melanie A. Edwards, St Louis, MO, and James D. Luketich, PA  Endoscopic Approach to Zenker's Diverticulum Ryan M. Levy, Pittsburgh, PA  Update on Advances in Antireflux Surgery Brian E. Louie, Seattle, WA  Endoluminal Management of Esophageal Leaks
	10:15 AM – 1 General T Technolog Moderator Pittsburgh, 10:15 AM 10:30 AM	I2:00 PM Grand Ballroom A-B horacic Track II: Emerging and/or Game-Changing gies in the Management of Esophageal Diseases ss: Melanie A. Edwards, St Louis, MO, and James D. Luketich, PA Endoscopic Approach to Zenker's Diverticulum Ryan M. Levy, Pittsburgh, PA Update on Advances in Antireflux Surgery Brian E. Louie, Seattle, WA Endoluminal Management of Esophageal Leaks David C. Rice, Houston, TX Advances in Peroral Endoscopic Myotomy Technology and Endoscopic Mucosal Closure

12:00 рм – 1:00 рм

Floridian Ballroom



11:45 AM



**Esophageal Replacement** Saverio La Francesca, Holliston, MA

**Submitted Presentation: A Bioengineered Implant for** 

#### STS/AATS TECH-CON

1:00 PM - 2	2:30 PM Grand Ballroom C-H
	ordiac Track III: Contemporary and Future Mitral Valve and brillation Practice
<b>Moderat</b> e TX	ors: Vinay Badhwar, Morgantown, WV, and Tom C. Nguyen, Houston,
1:00 рм	Overview: Advances in Surgical Therapy for Mitral Valve Disease and Atrial Fibrillation Vinay Badhwar, Morgantown, WV
1:04 рм	Defining the Mitral Valve Surgeon of the Future: Time for an Honest Appraisal T. Sloane Guy, New York, NY
1:12 рм	MitraClip, Transcatheter Mitral Valve Repair (TMVR), Robotics, Port Access, and Open Surgery: Can We Do It All? Robert L. Smith, Plano, TX
1:20 рм	Robotic Reconstruction for Complex Primary Mitral Regurgitation: No Limits Vinay Badhwar, Morgantown, WV
1:28 рм	Robotic/Minimally Invasive Cardiac Surgery Treatment Options for Atrial Fibrillation: Better Than Catheter Ablation?  Evelio Rodriguez, Nashville, TN
1:36 рм	Panel Discussion
1:46 рм	Are Apically Delivered Chords Really the Answer? Tirone E. David, Toronto, Canada
1:54 рм	Transcatheter Mitral Valve Replacement: Global and Early US Experience Gilbert H. L. Tang, New York, NY
2:02 РМ	Pipeline of TMVR: The Train Has Left the Station!  Michael J. Mack, Plano, TX
2:10 рм	Pipeline of Tricuspid Devices: Fumbling In the Dark or Zeroing In on an Indication?  Steven F. Bolling, Ann Arbor, MI
2:18 рм	Panel Discussion
1:00 PM - 2	2:30 PM Grand Ballroom A-B
	Thoracic Track III: Emerging and/or Game-Changing ly Invasive Surgery and Other Technologies
<b>Moderate</b> NY	ors: Michael F. Reed, Hershey, PA, and Inderpal S. Sarkaria, New York
1:00 рм	Novel Suture Technologies Michael F. Reed, Hershey, PA
1:12 РМ	Chest Wall Reconstruction Technologies Shanda H. Blackmon, Rochester, MN
1:24 рм	Advanced Imaging Technologies  Yolonda L. Colson, Boston, MA
1:36 рм	Submitted Presentation: Articulated Minimally Invasive



**Surgery Instrumentation** 

Joel Dunning, Middlesbrough, United Kingdom

1:48 PM Submitted Presentation: Immersive Video Operating

**Room Training** 

Douglas R. Johnston, Cleveland, OH

2:00 PM Submitted Presentation: Autonomous Camera System

Traves D. Crabtree, Springfield, IL

2:12 PM Submitted Presentation: Alternate New Device for Chest

Access

Daniel L. Miller, Marietta, GA

2:30 PM - 3:00 PM

**Grand Ballroom Foyer** 

**Grand Ballroom C-H** 

BREAK—Visit Tech-Con Exhibits

3:00 PM - 5:00 PM

Joint Session: Robotic Cardiothoracic Innovations and "Shark

Tank"—Rapid-Fire Pitches of Revolutionary Technology

Moderators: Richard Lee, St Louis, MO, and James D. Luketich, Pittsburgh, PA

"Shark Tank" Judges: Rick Anderson, Austin, TX, Steven F. Bolling, Ann Arbor, MI, and William E. Cohn, Houston, TX

3:00 PM DEBATE: Robotic Mitral Valve Repair Is a Critical Part of

the Future of Our Specialty CON: TBD

PRO: T. Sloane Guy, New York, NY

3:30 PM DEBATE: Robotic Thoracic Surgery Is a Critical Part of the

Future of Our Specialty

CON: Mark S. Allen, Rochester, MN PRO: Robert J. Cerfolio, New York, NY

3:50 PM What's New in Robotic Cardiothoracic Surgical

**Technology: Updates From Robotic Companies That Are** 

Leading the Way—Intuitive Surgical

 ${\it Catherine\ Mohr,\ Sunnyvale,\ CA}$ 

4:00 PM What's New in Robotic Cardiothoracic Surgical

**Technology: Updates From Robotic Companies That Are** 

Leading the Way—Medtronic Paul Hermes, North Haven, CT

4:10 PM What's New in Robotic Cardiothoracic Surgical

**Technology: Updates From Robotic Companies That Are** 

Leading the Way—Verb Surgical

TBD

4:20 PM Submitted Presentation: Novel Nanoparticle for Enhanced

**Pulmonary Nodule Identification** 

Jeffrey Port, New York, NY

4:30 PM Submitted Presentation: Left Ventricular Inflow Stent

**Reduces Suction Events and Improves Mechanical** 

**Circulatory Support** 

James H. Mehaffey, Charlottesville, VA

4:40 PM Submitted Presentation: Videoscope Cleaning Trocar for

**Minimally Invasive Surgery** 

Bryan M. Burt, Houston, TX



#### STS/AATS TECH-CON

5:00 PM - 6:30 PM

**Grand Ballroom Foyer** 

**RECEPTION**—Visit Tech-Con Exhibits

#### STS 54TH ANNUAL MEETING PROGRAM OUTLINE

The information provided here is an outline of the program. Only presenting authors are listed. Please consult the STS Meetings app or the *Abstract Book* (available online at www.sts.org/abstractbook) for full abstract text, complete author lists, and disclosures.

#### **SUNDAY, JANUARY 28**

7:00 AM - 6:30 PM

Atrium Lobby, First Floor

Registration

8:00 AM – 12:00 PM Floridian Ballroom B-C

Adult Congenital Heart Disease Symposium: Surgical Management of Hypertrophic Cardiomyopathy and Anomalous Aortic Origin of a Coronary Artery in Children and Adults

Moderators: Stephanie M. Fuller, Philadelphia, PA, Charles B. Huddleston, St Louis, MO, Frank G. Scholl, Hollywood, FL, and James S. Tweddell, Cincinnati, OH

8:00 AM Basal Septal Myectomy for HOCM: Technical Tips

Francis D. Pagani, Ann Arbor, MI

8:20 AM HOCM With Midventricular Obstruction: The

Transventricular Approach Joseph A. Dearani, Rochester, MN

8:40 AM Nonobstructive HCM: LV Cavity Enlargement Using an

**Apical Approach** 

Hartzell V. Schaff, Rochester, MN

9:00 AM What to Do With the Mitral Valve in HOCM

Nicholas G. Smedira, Cleveland, OH

9:20 AM Risk Stratification in HOCM: When to Refer and ETOH

**Ablation vs Surgery**Steve Ommen, Rochester, MN

9:40 AM Panel Discussion/Q&A

9:55 AM Break

10:10 AM Imaging and Nomenclature for AAOCA

Carlos M. Mery, Houston, TX

10:30 AM How I Approach AAOCA: Children vs Adults

Vaughn A. Starnes, Los Angeles, CA

10:50 AM How I Approach AAOCA: Options Other Than Unroofing

Frank L. Hanley, Stanford, CA

11:10 AM What Is the Role for Coronary Artery Bypass Grafting in

AAOCA, and When Do You Operate on the Anomalous

Right Coronary Artery?

James Jaggers, Aurora, CO

11:30 AM Risk Stratification in AAOCA: When to Offer Surgery

Julie Brothers, Philadelphia, PA

11:45 AM Panel Discussion/Q&A



#### **SUNDAY. JANUARY 28**

8:00 AM - 12:00 PM Rooms 304-305 **Practice Management Summit** Moderators: Frank L. Fazzalari, Ann Arbor, MI, and Paul S. Levy, Jonesboro, AR8:00 AM Introduction Frank L. Fazzalari, Ann Arbor, MI **Compensation and Participation: Contracting Challenges** 8:10 AM and Choices Mark Kopson, Bloomfield Hills, MI 8:35 AM Annual Update in Economic Survey Data, Trends, and Use Michael N. Heaton, Indianapolis, IN Partnering for Excellence in Today's Health Care 9:00 AM **Environment: HCA Healthcare's Cardiovascular Service** Line 2018 Update Steven V. Manoukian, Nashville, TN **Panel Discussion** 9:25 AM 9:50 AM **Break Roles and Responsibilities of a Medical Device Company** 10:10 AM **Chief Medical Officer** Thomas A. Vassiliades, Mounds View, MN Built for Growth: Designing an Arrhythmia Center to 10:30 AM **Harvest Untapped Potential** Aaron Robinson, Cocoa Beach, FL 10:50 AM **Update From the STS Council on Health Policy and** Relationships Alan M. Speir, Falls Church, VA The Next Wave of Innovation to Make Patients Safer 11:10 AM Kathleen Sutcliffe, Baltimore, MD **Panel Discussion** 11:30 AM 8:00 AM - 12:00 PM Floridian Ballroom D STS/AATS Critical Care Symposium: When Things Go Wrong in the CTICU and What to Do About It Moderators: Rakesh C. Arora, Winnipeg, Canada, Michael S. Firstenberg, Akron, OH, Jay G. Shake, Jackson, MS, and Glenn J. R. Whitman, Baltimore, MDIntroduction and Welcome 8:00 AM Jay G. Shake, Jackson, MS Session 1: How to Make Things Go Right **Enhanced Recovery After Cardiothoracic Surgery** 8:05 AM Jacob Moremen, Jackson, MS Checklists in the CTICU 8:25 AM Subhasis Chatterjee, Houston, TX **Difficult Cases** 





8:45 AM

9:00 AM

Rita C. Milewski, Philadelphia, PA

**Break and Networking** 

Session 2: When Things Go Wrong Again

9:15 AM Evolution of Critical Care and Quality Improvement

in the CTICU

Richard L. Prager, Ann Arbor, MI

9:35 AM Failure to Rescue in Cardiothoracic Surgery

Gorav Ailawadi, Charlottesville, VA

9:55 AM Long-Term Fate After Discharge Following Cardiac Surgery

Michael J. Mack, Plano, TX

10:15 AM Break and Networking

Session 3: When Is Enough, Enough? End-of-Life
Discussions vs Continued Aggressive Therapy

10:30 AM Ethics 101

Symposium

Rakesh C. Arora, Winnipeg, Canada

10:55 AM DEBATE: Should E-CPR Be Included as Part of Every

**Cardiopulmonary Arrest Protocol?** 

Yes: Susan D. Moffatt-Bruce, Columbus, OH No: Ashish Shah, Nashville, TN

11:35 AM Audience O&A and Panel Discussion

8:00 AM - 12:00 PM Room 315

### CHEST @ STS: Advanced Bronchoscopy and Surgical Airway

Moderators: Momen M. Wahidi, Durham, NC, and Richard I. Whyte, Boston, MA

8:00 AM Introduction and Welcome

8:10 AM EBUS and Transbronchial Needle Aspiration

Momen M. Wahidi, Durham, NC

8:30 AM Navigational Bronchoscopy

Alex Chen, St Louis, MO

8:50 AM EBUS Case Scenarios

Momen M. Wahidi, Durham, NC, and Richard I. Whyte,

Boston, MA

9:20 AM Panel Discussion

9:45 AM Break

10:00 AM Therapeutic Bronchoscopy

Moishe A. Liberman, Montreal, Canada

10:20 AM Tracheal Resection for Benign and Malignant Disease

Matthew G. Hartwig, Durham, NC

10:40 AM Tracheobronchoplasty

Sidharta P. Gangadharan, Boston, MA

11:00 AM Airway Carcinoids - Endoscopic Management

Adnan Majid, Boston, MA

11:20 AM Airway Carcinoids – Surgical Management

Richard I. Whyte, Boston, MA

11:40 AM Panel Discussion

#### **SUNDAY, JANUARY 28**

8:00 AM - 12:00 PM Floridian Ballroom A SCA @ STS: Integrating Perioperative Echocardiography Into Cardiac **Surgical Clinical Decision Making** Moderators: Alina Nicoara, Durham, NC, and Stanton K. Shernan, Boston, MAPanelists: Vinay Badhwar, Morgantown, WV, John V. Conte, Hershey, PA, Tsuyoshi K. Kaneko, Boston, MA, and Vinod H. Thourani, Washington, DC 8:00 AM Introduction Case 1: Ischemic Mitral Regurgitation—Impact of New 8.10 AM **Guideline Recommendations** Stanton K. Shernan, Boston, MA 8:30 AM **Panel Discussion** 8:50 AM Case 2: MitraClip—A Complex Case Charles B. Nyman, Boston, MA **Panel Discussion** 9:10 AM Case 3: Left Ventricular Outflow Tract Obstruction After 9:30 AM **Mitral Valve Replacement** Stanton K. Shernan, Boston, MA **Panel Discussion** 9:50 AM 10:10 AM **Break** 10:30 AM Case 4: Right Ventricular Dysfunction After Tricuspid Valve Surgery Alina Nicoara, Durham, NC **Panel Discussion** 10:50 AM 11:10 AM Case 5: High Pressure Gradient After Aortic Valve Replacement Alina Nicoara, Durham, NC **Panel Discussion** 11:30 AM 11:50 AM **Concluding Remarks** 8:00 AM - 4:00 PM Room 316 **Multidisciplinary Innovations in Cardiothoracic Patient Care** Moderators: Tara Bartley, Birmingham, United Kingdom, and Sondra J. Ley, Greenbrae, CA Welcome 8:00 AM Richard L. Prager, Ann Arbor, MI 8:15 AM Percutaneous Valve Innovations: Impact for Non-Surgeons Patricia A. Keegan, Atlanta, GA 8:45 AM Extracorporeal Membrane Oxygenation (ECMO) **Innovations: Strategies That Make a Difference** Michael Colligan, Houston, TX



**Designing a Comprehensive Ventricular Assist Device** 



Caregiver Burnout
Mary Zellinger, Atlanta, GA

**Program** 

**Break** 

Sarah D. Schettle, Rochester, MN

9:15 AM

9:45 AM

10:15 AM

10:30 AM Bundled Payments in Cardiac Surgery

Jill R. Engel, Durham, NC

10:45 AM Heart Service Line Approach to Safe Culture

Brittany A. Zwischenberger, Lexington, KY

11:00 AM Negative Pressure Wound Therapy on Closed Wounds

Richard Van Valen, Rotterdam, The Netherlands

11:15 AM Implementation of the STS Cardiac Surgical Resuscitation

Protocol

Richard S. Bell, Baltimore, MD, and Lauren M. Espeso,

Baltimore, MD

11:30 AM Break

12:45 PM Innovations in Nursing: International Perspective

Tara Bartley, Birmingham, United Kingdom

1:30 PM Current Thoughts on Medical Innovations

Joel Dunning, Middlesbrough, United Kingdom

2:15 PM Break

2:30 PM ABSTRACT: A Nurse-Driven Protocol Is Safe and Cost-

**Effective for Extracorporeal Membrane Oxygenator** 

**Support: A Cohort Study** 

H. Merritt

University of Nebraska Medical Center, Omaha

2:45 PM ABSTRACT: Total Artificial Heart Using Bilateral

Paracorporeal Pulsatile Ventricular Assist Devices in an

8.2 kg Child

R. K. Woods

Children's Hospital of Wisconsin, Milwaukee

3:00 PM ABSTRACT: Dedicated Thoracic Enhanced Recovery

**Program Reduces Postoperative Narcotic Consumption** 

E. Podgaetz

University of Minnesota, Minneapolis

3:15 PM ABSTRACT: The Effect of Frailty on Outcomes in Adult

**Cardiac Surgery Varies by Age** 

C. S. Bergquist

University of Michigan, Ann Arbor

3:30 PM ABSTRACT: Evolution of a Mechanical Circulatory Support

Program at a Freestanding Children's Hospital

C. D. Fraser Jr

Texas Children's Hospital/Baylor College of Medicine, Houston

3:45 PM Closing Remarks

Sondra J. Ley, Greenbrae, CA

10:00 AM - 4:30 PM Grand Ballroom A-B

#### "My Tube" Adult Cardiac How-To Video Session

Moderators: Gorav Ailawadi, Charlottesville, VA, and Ahmet Kilic, Baltimore, MD

**Mitral/Atrial Fibrillation Surgery** 

10:00 AM Mitral Repair With Mitral Annular Calcification

Tirone E. David, Toronto, Canada

10:12 AM Simple Robotic Mitral Repair

Robert L. Smith, Plano, TX



#### **SUNDAY, JANUARY 28**

10:24 ам	Rheumatic Mitral Repair Vinay Badhwar, Morgantown, WV
10:36 ам	Mitral Repair With Hypertrophic Obstructive Cardiomyopathy Michael Chu, London, Canada
10:48 ам	Mitral Repair With Papillary Muscle Repositioning Joseph Lamelas, Miami Beach, FL
11:00 ам	Surgical Left Atrial Appendage (LAA) Closure via Left Atrium and Epicardial A. Marc Gillinov, Cleveland, OH
11:12 ам	Surgical LAA Closure: Epicardial and Endocardial Techniques Richard Lee, St Louis, MO
11:24 ам	Maze During Non-Mitral Surgery Jonathan M. Philpott, Norfolk, VA
11:36 ам	Question the Experts
12:00 рм	Break
	Coronary Artery Disease
12:50 рм	Coronary Endarterectomy Silvana Marasco, Melbourne, Australia
1:02 РМ	Combined Carotid-Coronary Artery Bypass Grafting (CABG) $TBD$
1:14 рм	Minimally Invasive CABG  Joseph McGinn, Charlotte, NC
1:26 РМ	Hybrid Coronary Revascularization (Robotic) Francis P. Sutter, Wynnewood, PA
1:38 рм	Question the Experts
	Aortic Valve/Aortic Surgery
1:50 рм	Sutureless Aortic Valve Replacement David A. Heimansohn, Indianapolis, IN
2:02 PM	Rare Alternative Access Transcatheter Aortic Valve Replacement (TAVR) – Carotid, Transcaval Vinod H. Thourani, Washington, DC
2:14 РМ	Surgical Removal of TAVR (Late Failure) Michael A. Borger, New York, NY
2:26 РМ	Redo Arch Reconstruction John A. Kern, Charlottesville, VA
2:38 рм	Redo Root (Root Abscess) Wilson Y. Szeto, Philadelphia, PA
2:50 рм	Dissection - Antegrade Stenting Derek R. Brinster, New York, NY
3:02 рм	Bicuspid Aortic Valve Repair Thomas G. Gleason, Pittsburgh, PA
3:14 рм	Question the Experts



**Heart Failure Surgery** 

3:26 PM Extracorporeal Membrane Oxygenation (ECMO) – Arterial

**Access (Femoral) With Distal Femoral Perfusion** 

David A. Dean, Atlanta, GA

3:38 PM ECMO – Left Ventricle Venting Strategies

Jay K. Bhama, Iowa City, IA

3:50 PM Temporary Left Ventricular Assist Device - Minimally

Invasive

Hiroo Takayama, New York, NY

4:02 PM Pump Exchange – Subcostal Approach

Behzad Soleimani, Hershey, PA

4:14 PM Minimally Invasive HVAD

Jan Schmitto, Hanover, Germany
4:26 PM Question the Experts

12:00 PM - 1:00 PM

**BREAK** 

1:00 PM - 4:00 PM

Palm Ballroom A, Second Floor

Residents Symposium: Transitioning From Residency to a Successful Practice

Moderator: Craig J. Baker, Los Angeles, CA

1:00 PM Introduction

**Session I: Finding a Job** 

1:05 PM Why I Chose Private Practice

Asad A. Shah, Raleigh, NC

1:18 PM Why I Chose Academics

Mara B. Antonoff, Houston, TX

1:31 PM Mechanics of Finding a Job

Ravi Ghanta, Houston, TX

1:44 PM Negotiating a Contract

Michael P. Robich, Portland, ME

1:57 PM Discussion

**Session II: Transition to Practice** 

2:30 PM Building a Successful Clinical Practice: Challenges and

**Solutions** 

Edward P. Chen, Atlanta, GA

2:43 PM Early Career Development Neel R. Sodha, Baltimore, MD

2:56 PM What You Need to Know About Finances: Coding, Billing,

Reimbursement, and Margins

Frederick Y. Chen, Boston, MA

3:09 PM Achieving a Successful Work/Life Balance

Sidharta P. Gangadharan, Boston, MA

3:22 PM Discussion

1:00 PM - 4:30 PM

Floridian Ballroom A

#### How-To Video Session: Technical Tips to Avoid Pitfalls and Simplify Congenital and Pediatric Cardiac Surgical Procedures

Moderators: S. Adil Husain, San Antonio, TX, and James S. Tweddell, Cincinnati, OH

**Session I: Ebstein Anomaly** 

1:00 PM Starnes Procedure

Vaughn A. Starnes, Los Angeles, CA

**Neonatal Ebstein Repair** 1:15 PM

Shu-Chien Huang, Taipei, Taiwan

1:30 PM **Cone Procedure** 

Joseph A. Dearani, Rochester, MN

Session II: Systemic Atrioventricular (AV) Valve Disease

**Use of CorMatrix for Mitral Valve Surgery** 1:45 PM

Richard G. Ohye, Ann Arbor, MI

2:00 PM Melody Valve Use in the Mitral Position

Sitaram M. Emani, Boston, MA

Complex AV Valve Repair Associated Stage II or III 2:15 PM

**Palliation for Single Ventricle Disease** 

Glen S. Van Arsdell, Ontario, Canada

2:30 PM **Break** 

Session III: Complex Biventricular Repairs

**Nikaidoh Procedure** 3:00 PM

Victor Morell, Pittsburgh, PA

**Biventricular Repairs in Complex Heterotaxy Patients** 3:15 PM

Pedro J. del Nido, Boston, MA

3:30 PM **Double Switch Operation** 

James S. Tweddell, Cincinnati, OH

Session IV: Mechanical Surgical Support

3:45 PM **Extracorporeal Membrane Oxygenation Simulation** 

Program

David M. McMullan, Seattle, WA

4:00 PM **HeartWare Total Artificial Heart** 

David L. Morales, Cincinnati, OH

**Transplant Techniques in Complex Fontan Patients** 4:15 PM

Kirk R. Kanter, Atlanta, GA

1:00 PM - 4:30 PM Floridian Ballroom D

#### How-To Video Session: Tips and Tricks to Maximize Efficiency in Minimally Invasive General Thoracic Surgery

Moderators: Robert J. Cerfolio, New York, NY, and Janet P. Edwards, Calgary, Canada

1:00 PM Introduction

1:05 PM **Robotic Lobectomy** 

Michael S. Kent, Boston, MA



#### **SUNDAY, JANUARY 28**

1:20 PM Thoracoscopic Lobectomy

Michael J. Weyant, Aurora, CO

1:35 PM Lean and Efficient Surgery and Recovery: A Systems

Approach

Mara B. Antonoff, Houston, TX, and David C. Rice, Houston, TX

1:50 PM Panel Discussion

2:05 PM Break

2:15 PM Robotic Segmentectomy

Robert J. Cerfolio, New York, NY

2:30 PM Thoracoscopic Segmentectomy

Janet P. Edwards, Calgary, Canada

2:45 PM How Do I Find the Nodule? Tips, Tricks, and Novel

**Techniques** 

Yolonda L. Colson, Boston, MA

3:00 PM Panel Discussion

3:15 PM Break

3:30 PM Robotic Ivor Lewis

Inderpal S. Sarkaria, Pittsburgh, PA

3:45 PM Transhiatal Esophagectomy

Jules Lin, Ann Arbor, MI

4:00 PM Endoscopic Approaches to Esophageal Cancer

Virginia R. Litle, Boston, MA

4:15 PM Panel Discussion

2:00 PM – 6:30 PM Third Floor Concourse

**Scientific Posters** 

4:30 PM – 6:30 PM Halls ABC, First Floor

#### **Opening Reception in STS Exhibit Hall**

7:00 PM - 10:00 PM

#### President's Reception

Network with STS surgeon leaders and fellow meeting attendees at the President's Reception. This high-profile event will be held on an oceanfront terrace at the luxurious Fort Lauderdale Marriott Harbor Beach Resort & Spa. While a tropical-themed band plays in the background, enjoy gourmet food stations and an open bar. Colorful tropical birds will be on hand to help set the mood. This reception takes the place of the STS Social Event, which previously had been held on Monday evening, leaving the night open for industry-sponsored events or socializing with your colleagues. Tickets can be purchased for \$95. Don't miss this opportunity to connect with leaders in cardiothoracic surgery in a picturesque, informal setting.

					Y 29

6:30 AM - 5:00 PM Atrium Lobby, First Floor

Registration

9:00 AM - 4:30 PM Halls ABC, First Floor

**Exhibit Hall** 

Third Floor Concourse 9:00 AM - 4:30 PM

Scientific Posters

7:00 AM - 10:50 AM **Grand Ballroom** 

**General Session I** 

Moderators: Richard L. Prager, Ann Arbor, MI, and Joseph F. Sabik III, Cleveland, OH

7:00 AM **Opening Remarks** 

7:15 AM ABSTRACT: J. Maxwell Chamberlain Memorial Paper for Adult Cardiac Surgery: Does Surgical Atrial Fibrillation Ablation Improve Long-Term Survival? A Multicenter **Analysis** 

A. Iribarne

Dartmouth-Hitchcock Medical Center, Lebanon, NH Discussant: A. Marc Gillinov, Cleveland, OH

7:35 AM ABSTRACT: J. Maxwell Chamberlain Memorial Paper for **General Thoracic Surgery: Enhanced Recovery Protocol Decreases Pulmonary and Cardiac Complications** Following Thoracotomy for Primary Lung Cancer

R. M. Van Haren

The University of Texas MD Anderson Cancer Center, Houston Discussant: Farhood Farjah, Seattle, WA

**ABSTRACT: J. Maxwell Chamberlain Memorial Paper for** 7:55 AM Congenital Heart Surgery: Where Are Patients From and Where Are They Going? Congenital Heart Surgery Referral Patterns in the US

T. Karamlou

Phoenix Children's Hospital, AZ

Discussant: James S. Tweddell, Cincinnati, OH

8:15 AM **ABSTRACT: Richard E. Clark Memorial Paper for Adult** Cardiac Surgery: National Outcomes of Elective Hybrid **Arch Debranching With Endograft Exclusion vs Total** Arch Replacement Procedures: Analysis of the STS Adult **Cardiac Surgery Database** 

P. Vallabhajosyula

University of Pennsylvania, Philadelphia Discussant: Himanshu J. Patel, Ann Arbor, MI

8:30 AM **ABSTRACT: Penetration, Completeness, and** Representativeness of the STS General Thoracic Surgery **Database for Lobectomy** 

B. C. Tong

Duke University Medical Center, Durham, NC

8:45 AM **Abstract Presentation** 



9:00 AM BREAK—Visit Exhibits and Scientific Posters

Complimentary coffee available in the Exhibit Hall

9:40 AM Introduction of the President Keith S. Naunheim, St Louis, MO

9:50 AM Presidential Address: Eye of the Beholder: The Reinvention

of Seeing

Richard L. Prager, Ann Arbor, MI

10:50 AM - 11:30 AM

#### **BREAK**—Visit Exhibits and Scientific Posters

Complimentary coffee available in the Exhibit Hall

11:30 ам – 12:30 рм

Floridian Ballroom A

#### **Adult Cardiac: Arrhythmia/Atrial Fibrillation**

Moderators: T. Sloane Guy, New York, NY, and Patrick M. McCarthy, Chicago, IL

11:30 AM Concomitant Atrial Fibrillation Made Simple: What Is the Right Lesion Set in Each Operation and What Is the Right Energy Source?

A. Marc Gillinov, Cleveland, OH

11:40 AM ABSTRACT: Outcomes of Robotic-Assisted Surgical
Ablation of Atrial Fibrillation Combined With Mitral Valve
Surgery

M.Ju

Asan Medical Center, Seoul, South Korea

11:50 AM Left Atrial Appendage: How Should I Treat and In What Setting?

Richard Lee, St Louis, MO

12:00 PM ABSTRACT: Hybrid Thoracoscopic Approach Is Effective for the Treatment of Long-Standing Persistent Lone Atrial Fibrillation: 3-Year Clinical Update of the HISTORIC-AF Trial

C. C. Muneretto

University of Brescia Medical School, Italy

12:10 PM ABSTRACT: Robotic Biatrial Cryo-Maze Ablation for

**Persistent Lone Atrial Fibrillation** 

V. Badhwar

West Virginia University, Morgantown

12:20 PM Discussion

11:30 AM – 12:30 PM Rooms 301-302

#### **Basic Science Research: Adult Cardiac**

Moderators: Arnar O. Geirsson, New Haven, CT, and Bo Yang, Ann Arbor, MI

11:30 AM ABSTRACT: Targeted Metabolomic Profiling Identifies
Novel Circulating Biomarkers in Peripheral Blood in
Nonsyndromic Thoracic Aortic Aneurysm

H. N. Wang

Duke University Medical Center, Durham, NC

11:40 AM ABSTRACT: Diazoxide Attenuates Spinal Cord Ischemia-Reperfusion Injury Through STAT3 Pathway

K. J. Yamanaka

University of Colorado, Aurora



#### 11:50 AM ABSTRACT: Microvesicles Induce Reduction in Inflammatory and Increase in Angiogenic Signaling in Chronically Ischemic Myocardium

L. A. Scrimgeour

Brown University, Providence, RI

## 12:00 PM ABSTRACT: Tissue-Engineered Cardiac Patches Seeded With Human-Induced Pluripotent Stem Cell-Derived Cardiac Progenitor Cells Promote Short-Term Cardiac Function in Rat Left Ventricle Model

S. Miyamoto

Nationwide Children's Hospital, Columbus, OH

#### 12:10 PM ABSTRACT: Decreased PGC-1α Post-Cardiopulmonary Bypass Leads to Impaired Oxidative Stress Response in Diabetic Patients

F. Mahmood

Beth Israel Deaconess Medical Center, Boston, MA

## 12:20 PM ABSTRACT: Development of a Porcine Beating Heart Model of Self-Myocardial Retroperfusion: Evaluation of Hemodynamic and Cardiac Responses to Ischemia and Potential Clinical Applications

D. Grandmougin
University of Lorraine

11:30 AM – 12:30 PM Room 304

#### **Basic Science Research: General Thoracic**

Moderators: Jonathan D'Cunha, Pittsburgh, PA, and Arun K. Singhal, Longview, TX

### 11:30 AM ABSTRACT: PorphyrinHDL: A Novel Photosensitizing Nanoparticle for Lung Cancer Therapy

H. Ujiie

Toronto General Hospital, Canada

## 11:45 AM ABSTRACT: Povidone lodine Results in Rapid Killing of Thymic Epithelial Tumor Cells Through Cellular Fixation

H. Lee

Baylor College of Medicine, Houston, TX

## 12:00 PM ABSTRACT: Dynamic Changes of Circulating Tumor DNA in Surgical Lung Cancer Patients: A Prospective Cohort Study K. Chen

Peking University People's Hospital, Beijing, China

## 12:15 PM ABSTRACT: Mesenchymal Stem Cells Regulate Granulation Tissue Formation of Bioengineered Tracheal Grafts

A. M. Al-Ayoubi

University of Iowa, Iowa City

11:30 AM – 12:30 PM Room 316

#### **Congenital: Adult Congenital**

Moderators: Joseph A. Dearani, Rochester, MN, and Kristine Guleserian, Miami, FL

### 11:30 AM ABSTRACT: Long-Term Growth of the Neoaortic Root After the Arterial Switch Operation

S. Oda

Fukuoka Children's Hospital, Japan





## 11:45 AM ABSTRACT: Surgery for Anomalous Aortic Origin of the Coronary Arteries – Not Just for Kids!

A. Vinnakota

Case Western Reserve University School of Medicine, Cleveland, OH

## 12:00 PM ABSTRACT: 360° Cone Reconstruction for Ebstein Anomaly

M. E. Mitchell

Children's Hospital of Wisconsin, Milwaukee

### 12:15 PM ABSTRACT: Aortic Dissection Following the Ross Procedure

S. R. Richey

Southern Illinois University School of Medicine, Carbondale

11:30 AM - 12:30 PM

Room 315

#### **Critical Care**

Moderators: Rainer G. H. Moosdorf, Marburg, Germany, and Joseph Rabin, Baltimore, MD

# 11:30 AM ABSTRACT: Even Mild Acute Kidney Injury Adversely Affects Early Survival After Thoracoabdominal Aortic Aneurysm Repair

S. Chatterjee

Baylor/Texas Heart Institute, Houston

# 11:45 AM ABSTRACT: Variation in Platelet Transfusion Practices During Cardiac Operations Among Centers in Maryland: Results From a State Quality Improvement Collaborative

X. N. Zhou

The Johns Hopkins University School of Medicine, Baltimore, MD

#### 12:00 PM ABSTRACT: Pretreatment With Glucose-Insulin-

Potassium Improves Ventricular Performance After Valve Replacement in Patients With Severe Aortic Valve Stenosis: A Randomized Controlled Trial

M. Licker

Geneva University Hospital, Switzerland

# 12:15 PM ABSTRACT: Nutrition Support After Cardiac Surgery: A Prospective Study Resulting in Evident Lessons to Improve Its Delivery

C. Ong

The Johns Hopkins Hospital, Baltimore, MD

11:30 AM - 12:30 PM

Floridian Ballroom B-C

## Diversity and Inclusion in Cardiothoracic Surgery: What's In It for Me?

Moderator: David T. Cooke, Sacramento, CA

Panelists: Joanna Chikwe, New York, NY, Christopher M. Draft, Atlanta, GA, Luis Godoy, Sacramento, CA, Keith S. Naunheim, St Louis, MO, Jacqueline Olive, Houston, TX, and Africa F. Wallace, Atlanta, GA

#### 11:30 AM Introduction

David T. Cooke, Sacramento, CA, and Richard L. Prager, Ann Arbor, MI

## 11:35 AM Bridging the Cultural Divide in Cardiothoracic Surgery: The Value Proposition of Diversity and Inclusion

Excellence
David A. Acosta, Washington, DC



## **MONDAY, JANUARY 29**

Introduction of Panelists 12:05 PM

David T. Cooke, Sacramento, CA

12:10 PM **Panel Discussion** 

11:30 AM - 12:30 PM

Floridian Ballroom D

## **General Thoracic: New Technology**

Moderator: Kazuhiro Yasufuku, Toronto, Canada

ABSTRACT: Novel Thoracoscopic Surgical Navigation System Provides Augmented Real-Time Imaging for Minimally Invasive Resection of Chest Wall Tumors

C. Lee

Toronto General Hospital, Canada

11:45 AM ABSTRACT: Digital Air Leak Monitoring for Patients **Undergoing Lung Resection: A Randomized Controlled Clinical Trial** 

A. I. Jad

Dalhousie University, Halifax, Canada

12:00 PM ABSTRACT: Decreased Length of Stay Associated With **Minimally Invasive Pulmonary Resection Does Not Translate to Functional Recovery Advantage** 

S. J. Kaplan

Virginia Mason Medical Center, Seattle, WA

**Health Informatics in the Thoracic Surgery Arena** Susan D. Moffatt-Bruce, Columbus, OH

11:30 AM - 12:30 PM Room 305

## STS/CATS/CSCS: Difficult Decisions in Thoracic Surgery—Advice **From Canadian and American Experts**

Moderators: Robert J. Cerfolio, New York, NY, and Janet P. Edwards, Calgary, Canada

11:30 AM Case Presentation: Difficult Decisions Involving N2 Disease in NSCLC

N2 Disease - US Perspective 11:36 AM Thomas A. D'Amico, Durham, NC

N2 Disease - Canadian Perspective 11:43 AM Sean C. Grondin, Calgary, Canada

Discussion 11:50 AM

Case Presentation: Airway Injuries and Fistulae in 12:00 PM **Esophageal Cancer Surgery** 

Post Esophagectomy Airway Injuries/Fistulae – US 12:06 PM **Perspective** 

Cameron D. Wright, Boston, MA

12:13 PM Post Esophagectomy Airway Injuries/Fistulae - Canadian **Perspective** 

Moishe A. Liberman, Montreal, Canada

Discussion 12:20 PM



Floridian Ballroom B-C

12:30 PM - 1:30 PM

#### **BREAK**—Visit Exhibits and Scientific Posters

Clinical Scenarios: Cardiologists and Surgeons Working Together

Moderators: Pavan Atluri, Philadelphia, PA, Vinay Badhwar, Morgantown, WV, James S. Gammie, Baltimore, MD, Michael J. Mack, Plano, TX, Ezequiel J. Molina, Chevy Chase, MD, Patrick T. O'Gara, Boston, MA, Paul Sorajja, Minneapolis, MN, and Vinod H. Thourani, Washington, DC

1:15 PM Introduction

Vinod H. Thourani, Washington, DC

**Heart Team Approach (Aortic Valve)** 

1:15 PM Case Presentation

Christian Shults, Washington, DC

1:20 PM Optimal Timing for Replacement of the Aortic Valve (SAVR or TAVR) for Severe, Asymptomatic Aortic Stenosis

Patrick T. O'Gara, Boston, MA

1:30 PM Lessons Learned From the STS/ACC TVT Registry™

Vinod H. Thourani, Washington, DC

1:38 PM The Rationale and Need for a National System of Valve

Centers

Michael J. Mack, Plano, TX

1:48 PM When to Replace the Root in Patients With Trileaflet and

Bileaflet Aortic Valve Disease Joseph E. Bavaria, Philadelphia, PA

1:58 PM Discussion and Case Wrap-Up

**Heart Team Approach (Tricuspid Valve)** 

2:15 PM Case Presentation

Steven F. Bolling, Ann Arbor, MI

2:23 PM How I Decide When to Operate on Patients With Isolated

Tricuspid Regurgitation and Those With Concomitant

**Mitral Valve Disease** 

James S. Gammie, Baltimore, MD

2:33 PM New Interventional Technology for Tricuspid

Regurgitation

Paul Sorajja, Minneapolis, MN

2:43 PM Discussion and Case Wrap-Up

3:00 PM Break

**Heart Team Approach (Mitral Valve Disease)** 

3:15 PM Case Presentation

Tom C. Nguyen, Houston, TX

3:20 PM When Should an Asymptomatic Patient With Severe Mitral

**Regurgitation Undergo Intervention?** 

Patrick T. O'Gara, Boston, MA

3:30 PM Current Trials for Transcatheter Mitral Valve Replacement

Gorav Ailawadi, Charlottesville, VA



## **MONDAY, JANUARY 29**

**Current Trials for Transcatheter Mitral Valve Repair** 3:40 PM Paul Sorajja, Minneapolis, MN 3:50 PM My Worst Surgical Mitral Valve Case and How I Got Out of It Tirone E. David, Toronto, Canada **Discussion and Case Wrap-Up** 4:00 PM **Heart Team Approach (Congestive Heart Failure)** 4:15 PM **Preferred Device for Post-Cardiotomy Temporary Support** When IABP Is Not Effective: ECMO, Impella, or Tandem Heart Pavan Atluri, Philadelphia, PA 4:25 PM **Preoperative Optimization for Right Ventricular Severe Dysfunction Prior to Cardiac Surgery** Patrick T. O'Gara, Boston, MA 4:35 PM My Worst LVAD Case and How I Got Out of It Francis D. Pagani, Ann Arbor, MI **Case-Based Scenarios for Choice of Durable Mechanical** 4:45 PM **Support in Heart Failure** Nir Uriel, Chicago, IL 4:55 PM Discussion and Concluding Remarks 1:30 PM - 3:30 PM Floridian Ballroom A Adult Cardiac: Aorta Moderators: Thomas G. Gleason, Pittsburgh, PA, and T. Brett Reece, Aurora, CO 1:30 PM **ABSTRACT: Outcomes of Elective Aortic Root Replacement** Procedure in the United States: Analysis of the STS Adult **Cardiac Surgery Database** P. Vallabhajosyula University of Pennsylvania, Philadelphia ABSTRACT: Redo Aortic Valve Replacement in a Patient 1:45 PM With Previous Aortic Root Replacement: Avoidance of Full **Root Re-replacement on a Routine Basis** I. E. Bavaria University of Pennsylvania, Philadelphia **DEBATE: Optimal Therapy for Failed Bioprosthetic Root** 2:00 PM Replacement in a 55-Year-Old Man: Redo Root/AVR vs Valve-in-Valve TAVR Redo Root: Edward P. Chen, Atlanta, GA Valve-in-Valve TAVR: Keith B. Allen, Kansas City, MO ABSTRACT: Long-Term Results of Valve-Sparing Aortic 2:30 PM Root Replacement: A Comparison Between Middle-Aged and Elderly Patients F. F. Settepani Humanitas Clinical and Research Center, Milan, Italy 2:45 PM ABSTRACT: Preoperative Sarcopenia Portends Worse **Outcomes After Descending Thoracic Aortic Aneurysm** 



McGovern Medical School at UT Health, Houston, TX



Repair
A. K. Tanaka

3:00 PM ABSTRACT: Distal Stent Graft-Induced New Entry
After Endovascular Repair of Type B Aortic Dissection:

Management Strategy, Recurrence, and Long-Term

Outcomes

W. G. Ma

Beijing Anzhen Hospital Capital Medical University, China

3:15 PM ABSTRACT: Outcome of Stentless Thoracic Endovascular Aortic Repair in Chronic DeBakey IIIb Aneurysm

T. T. Kim

Gangnam Severance Hospital, Yonsei University College of

Medicine, Seoul, South Korea

1:30 PM - 3:30 PM

Floridian Ballroom D

#### **Adult Cardiac: Ischemic**

Moderators: Richard Lee, St Louis, MO, and Brett C. Sheridan, San

Francisco, CA

1:30 PM ABSTRACT: Long-Term Patency of Individual Segments of Different Internal Thoracic Artery Graft Configurations

S. Raza

Cleveland Clinic, OH

1:45 PM ABSTRACT: One Is Never Enough: Incremental Value of

Three or More Arterial Grafts in Coronary Artery Bypass Grafting—The Effect of Native Coronary Disease

T. A. Schwann

University of Toledo Medical Center, OH

2:00 PM ABSTRACT: Bilateral Internal Mammary Artery Utilization

in Diabetics: Friend or Foe?

T. C. Crawford

The Johns Hopkins Hospital, Baltimore, MD

2:15 PM Which Diabetics Should Have Bilateral Internal Mammary

**Artery Grafting?** 

Joseph F. Sabik III, Cleveland, OH

2:30 PM ABSTRACT: A Multi-Institutional Analysis of Patients

**Undergoing Hybrid Coronary Revascularization for** 

**Multivessel Coronary Artery Disease** 

N. M. Ndubisi

Emory University School of Medicine, Atlanta, GA

2:45 PM ABSTRACT: Del Nido Cardioplegia in Adult Coronary

**Artery Bypass Grafting Surgery** 

T. Timek

Spectrum Health, Grand Rapids, MI

3:00 PM ABSTRACT: Coronary Artery Bypass Surgery Compared to

Percutaneous Coronary Intervention in Patients Younger

Than 50 Years of Age: Long-Term Outcomes

W. I. Awad

St Bartholomew's Hospital, London, United Kingdom

3:15 PM Updates on Trials of Percutaneous Coronary Intervention

vs Coronary Artery Bypass Grafting Surgery

Stuart Head, Rotterdam, Netherlands

1:30 PM - 3:30 PM Room 305

#### Congenital: Pediatric Congenital I

Moderators: Carl L. Backer, Chicago, IL, and James S. Tweddell, Cincinnati, OH

1:30 PM ABSTRACT: Richard E. Clark Memorial Paper for Congenital Heart Surgery: Development of a Congenital Heart Surgery Composite Quality Measure: An Analysis of

the STS Congenital Heart Surgery Database

S. K. Pasquali

University of Michigan, Ann Arbor

Discussant: Charles D. Fraser Jr, Houston, TX

1:45 PM ABSTRACT: Listing Low Weight Infants for Heart Transplantation: Is It Prudent?

D. L. Morales

Cincinnati Children's Hospital Medical Center, OH

2:00 PM ABSTRACT: Complex Orthotopic Heart Transplantation in a Neonate With Cardiomyopathy, Dextrocardia, and Heterotaxy Syndrome

U. S. Boston

Le Bonheur Children's Hospital, Memphis, TN

2:15 PM ABSTRACT: Long-Term Results Comparing the Use of Artificial Chordae to Other Chordal Procedures for Mitral Valve Repair in Children

S. Sivalingam

National Heart Institute Malaysia, Kuala Lumpur

2:30 PM ABSTRACT: Impact of Total Anomalous Pulmonary Venous Connection Repair on Left Ventricular Function

Y. N. Nakamura

National Cerebral and Cardiovascular Center, Suita, Japan

2:45 PM ABSTRACT: One-Stage Unifocalization for Pulmonary Atresia/Ventricular Septal Defect (VSD)/Major

> Aortopulmonary Collaterals: Is Concomitant VSD Closure Associated With a Better Outcome Compared to Delayed

Repair?

M. Trezzi

Bambino Gesù Children's Hospital, Rome, Italy

3:00 PM DEBATE: Vascular Ring Surgery

Open Technique: Carl L. Backer, Chicago, IL

Thoracoscopic Technique: Kristine Guleserian, Miami, FL

3:20 PM Discussion

1:30 PM - 3:30 PM Room 315

#### **General Thoracic: Lung Cancer I**

 $\begin{tabular}{ll} \textbf{Moderators:} & Robert \ E. \ Merritt, \ Columbus, \ OH, \ and \ Betty \ C. \ Tong, \ Durham, \ NC \end{tabular}$ 

1:30 PM ABSTRACT: Factors Associated With New Persistent Opioid

Use After Lung Resection

A. A. Brescia University of Michigan, Ann Arbor

1:45 PM The Thoracic Surgeon's Role in the Opioid Epidemic

David T. Cooke, Sacramento, CA





2:00 PM ABSTRACT: Segmentectomy Is Equivalent to Lobectomy in Hypermetabolic C-Stage IA Lung Adenocarcinomas

M. K. Kamel

NewYork-Presbyterian Hospital, Weill Cornell Medical College, NY

2:15 PM ABSTRACT: Does the Use of Incentive Spirometry in Addition to Physiotherapy Reduce Postoperative Pulmonary Complications in the Thoracic Population? A Randomized Controlled Trial

W. C. Hanna

McMaster University, Hamilton, Canada

2:30 PM ABSTRACT: Prognostic Impact of the Extent of Lymph Nodal Dissection in Clinical Stage I Radiological Part-Solid Lung Adenocarcinoma: Propensity Score-Matched Analysis

A. A. Hattori

Juntendo University, Tokyo, Japan

2:45 PM ABSTRACT: Spread Through Air Spaces Is a Prognostic Factor in Sublobar Resection of Non–Small-Cell Lung Cancer

S. S. Shiono

Yamagata Prefectural Central Hospital, Japan

3:00 PM ABSTRACT: Synchronous Multiple Lung Adenocarcinomas: Surgery Yields Favorable Outcomes for Select Patients

Y. N. Zhang

Fudan University Shanghai Cancer Center, China

3:15 PM ABSTRACT: Thoracoscopic Management of a Major Vascular Injury During Uniportal Video-Assisted Lingulectomy

R. Oliveira

Institut Universitaire de Cardiologie et de Pneumologie de Qúebec, Canada

1:30 PM - 3:30 PM Room 316

#### **General Thoracic: Lung Transplantation**

Moderators: Marcelo Cypel, Toronto, Canada, and Daniel Kreisel, St Louis, MO

1:30 PM Health Disparities in Lung Transplantation

Errol L. Bush, Baltimore, MD

1:45 PM ABSTRACT: Lung Transplantation From Donors After Circulatory Death: Single Center and United States

**Experience** 

M. A. Villavicencio

Massachusetts General Hospital, Boston

2:00 PM ABSTRACT: Predictors of Vocal Cord Dysfunction in Lung

**Transplantation Recipients** 

K. D. Joubert

University of Arkansas, Little Rock

2:15 PM ABSTRACT: The Impact of Donor-Recipient Age Mismatch on Lung Transplantation Outcomes

D. J. Hall

University of Florida, Gainesville



**ABSTRACT: Physical Health-Related Quality of Life** 2:30 PM **Decreases Significantly Over Time in Single Lung** Transplant Recipients as Compared With Double Lung **Transplant Recipients** 

D. M. Gilmore

Vanderbilt University Medical Center, Nashville, TN

2:45 PM ABSTRACT: Prevalence and Natural History of Barrett's **Esophagus in Lung Transplant Recipients: A Single-Center Experience** 

R. M. Bremner

Norton Thoracic Institute, St Joseph's Hospital and Medical Center, Phoenix, AZ

ABSTRACT: Traumatically Brain-Injured Donors and the 3:00 PM Impact on Lung Transplant Survival: We Can Breathe a Sigh of Relief

T. C. Crawford

The Johns Hopkins Hospital, Baltimore, MD

**Ex-Vivo Lung Perfusion: Current Status** 3:15 PM Pablo Sanchez, Seattle, WA

1:30 PM - 3:30 PM Room 304

## **International Symposium: Confronting Infectious Diseases in Young**

**Adults Undergoing Cardiac Surgery** Moderator: Juan P. Umaña, Bogotá, Colombia

1:30 PM Introduction

1:40 PM The Scope of Repairing Infective Mitral Valves in the **Current Era** 

Taweesak Chotivatanapong, Nonthaburi, Thailand

1:55 PM The Impact of Mechanical Support in Infectious Diseases Enrico R. Ferrari, Lugano, Switzerland

2:10 PM Repairs of the Bicuspid Aortic Valve on the Prognosis of **Infected Young Adults** 

Joseph E. Bavaria, Philadelphia, PA

A Case of Endocarditis With Neurological Complications 2:25 PM Michele De Bonis, Milan, Italy

**Redo Transcatheter Interventions for Failing Repairs** 2:45 PM Enrico R. Ferrari, Lugano, Switzerland

3:00 PM Diagnosis and Treatment of Thrombosis Affecting the Left and Right Side Valves

Darshan Reddy, Izinga Ridge, South Africa

3:15 PM **Diagnosis and Treatment of Aortic Infection Prostheses** Joseph S. Coselli, Houston, TX

1:30 PM - 3:30 PM Rooms 301-302

### SVS @ STS: Sharing Common Ground for Cardiovascular Problems

Moderators: Keith R. Allen, Sioux City, IA, and Ali Azizzadeh, Houston, TX Panelists: Joseph E. Bavaria, Philadelphia, PA, Richard Cambria, Boston, MA, Joseph S. Coselli, Houston, TX, Matthew J. Eagleton, Cleveland, OH, Anthony L. Estrera, Houston, TX, Joseph V. Lombardi, Camden, NJ, Michel S. Makaroun, Pittsburgh, PA, Gustavo S. Oderich, Rochester, MN, Eric E. Roselli, Cleveland, OH, Hazim J. Safi, Houston, TX, Wilson Y. Szeto, Philadelphia, PA, and Y. Joseph Woo, Stanford, CA

1:30 PM Introduction

1:35 PM What Cardiac Surgeons Can Learn From Vascular Surgeons

Alan B. Lumsden, Houston, TX

2:20 PM Discussion

2:30 PM Type A Aortic Dissection With Malperfusion: Initial

Management From a Cardiac Surgeon's Perspective

Wilson Y. Szeto, Philadelphia, PA

2:40 PM Type A Aortic Dissection With Persistent Malperfusion

Following Repair: Vascular Surgery Options

Joseph V. Lombardi, Camden, NJ

2:50 PM Discussion

3:00 PM Thoracoabdominal Aneurysm: Pearls for Successful Open

Repair

Hazim J. Safi, Houston, TX

3:10 PM Discussion

3:20 PM Branched Endografting Techniques in the Arch and

Thoracoabdominal Aorta Adam W. Beck, Birmingham, AL

3:30 PM - 4:15 PM

#### **BREAK**—Visit Exhibits and Scientific Posters

Complimentary coffee available in the Exhibit Hall

4:15 PM - 5:15 PM

Floridian Ballroom A

#### Adult Cardiac: VAD Transplant/ECMO

Moderators: Brett C. Sheridan, San Francisco, CA, and Ibrahim Sultan, Pittsburgh, PA

4:15 PM ABSTRACT: Risk Factors for All-Cause Mortality Following
Post-Cardiotomy Venoarterial Extracorporeal Membrane

Post-Cardiotomy Venoarterial Extracorporeal Membrane Oxygenation: Analysis of the STS Adult Cardiac Surgery Database

C. L. Tarola

London Health Sciences Center, Canada

4:27 PM ABSTRACT: Predictors of Early and Mid-Term Outcomes

After Bridge to Left Ventricular Assist Device by

**Extracorporeal Life Support** 

D. A. Tsyganenko

Heart Institute Berlin, Germany

4:39 PM Mini-Access Central Extracorporeal Membrane

Oxygenation Cannulation

Ashok N. Babu, Nashville, TN

4:51 PM ABSTRACT: Severe Tricuspid Valve Regurgitation in

Patients Who Undergo Continuous-Flow Left Ventricular Assist Device Implantation: Concomitant Tricuspid Valve Procedures Do Not Reduce Recurrence of Regurgitation or

Improve the Rate of Survival

A. C. Critsinelis

Texas Heart Institute/Baylor College of Medicine, Houston

## **MONDAY, JANUARY 29**

## 5:03 PM ABSTRACT: Combined Heart-Kidney and Heart-Liver Transplantation Provide Improved Immunoprotection of the Cardiac Allograft

A. S. Chou

University of Pennsylvania, Philadelphia

4:15 PM - 5:15 PM Room 315

#### **Ethics Debate: Neighborly Help or Itinerant Surgery?**

Facilitator: Robert M. Sade, Charleston, SC

Pro - General Surgeon Postoperative Coverage Is Acceptable:

James S. Allan, Marblehead, MA

Con - Only Thoracic Surgeon Postoperative Coverage Is Acceptable:

Alberto Ferreres, Buenos Aires, Argentina

4:15 PM - 5:15 PM Room 305

### Research Using the STS National Database

Moderator: Felix G. Fernandez, Atlanta, GA

**4:15 PM** Introduction to STS Research Felix G. Fernandez, Atlanta, GA

4:20 PM PUF Research Program: Policies and Procedures

Kevin W. Lobdell, Charlotte, NC

4:28 PM PUF Research Program: Early Experience

Robert H. Habib, Chicago, IL

4:36 PM Investigator Experience With the PUF Research Program

Malcolm M. DeCamp, Chicago, IL

4:43 PM Access and Publications Research Program

Jeffrey P. Jacobs, St Petersburg, FL

4:51 PM Longitudinal Follow-Up and Linked Registries Research

**Program** 

Matthew L. Williams, Philadelphia, PA

5:01 PM Panel Discussion

4:15 PM - 5:15 PM Rooms 220-221

#### STS Key Contacts: Advocates for Cardiothoracic Surgery

Moderator: Madeleine Stirling, Washington, DC

4:15 PM Key Contacts Overview

Madeleine Stirling, Washington, DC

4:25 PM STS-PAC Overview

Frederick L. Grover, Aurora, CO

4:35 PM Health Care Debate

Stephen J. Lahey, Ipswich, MA

4:50 PM Mock Congressional Meeting

Malini P. Daniel, Philadelphia, PA, and Keith A. Horvath,

Washington, DC

5:05 PM Awards and Networking



4:15 PM - 5:15 PM Room 316

## The Annals Academy: Preparation and Interpretation of National Database Research

Moderator: Benjamin D. Kozower, St Louis, MO

4:15 PM Introduction

Benjamin D. Kozower, St Louis, MO

4:20 PM Using the STS National Database in Longitudinal

Follow-Up

Mark W. Onaitis, La Jolla, CA

4:35 PM Common Pitfalls of Observational Database Research

Graham A. Colditz, St Louis, MO

4:50 PM Incorporating Long-Term Outcomes and Patient-Reported

**Outcomes into the STS National Database** 

Benjamin D. Kozower, St Louis, MO

5:05 PM Panel Discussion

4:15 PM - 5:15 PM Rooms 301-302

## The Importance of Physician Documentation in Reimbursement

Moderators: Francis C. Nichols, Rochester, MN, and Scott C. Silvestry, Orlando, FL

4:15 PM Reimbursement Overview

Scott C. Silvestry, Orlando, FL

4:30 PM Documentation for Medical Necessity and Diagnoses

V. Seenu Reddy, Nashville, TN

4:45 PM Documentation for Services Rendered

Sanjay A. Samy, Albany, NY

4:55 PM Summary: Putting It All Together

Francis C. Nichols, Rochester, MN

5:05 PM Q&A

4:15 PM – 5:15 PM Floridian Ballroom D

## Women in Thoracic Surgery: How to Successfully Implement Surgical Innovations and New Technologies Into Practice

Moderator: Shanda H. Blackmon, Rochester, MN

4:15 PM Introduction

Shanda H. Blackmon, Rochester, MN

4:20 PM Privileging, Credentialing, and Monitoring of New

**Technology** 

Shanda H. Blackmon, Rochester, MN

4:40 PM Developing Multidisciplinary Partnerships to Facilitate

Approval for New Technology

David T. Cooke, Sacramento, CA

5:00 PM Q&A

5:15 PM – 6:30 PM Floridian Ballroom Lobby

#### **Scientific Posters and Wine**

5:30 PM - 6:30 PM Room 316

#### **Business Meeting (STS Members Only)**



## **TUESDAY, JANUARY 30**

## **TUESDAY, JANUARY 30**

6:30 AM - 4:30 PM

Atrium Lobby, First Floor

#### Registration

7:30 AM - 8:30 AM

Various locations: see below

#### **Meet the Experts Sessions**

#### Meet the Experts Session 1

Room 223

#### Management of Esophageal Leaks

Faculty: Mark S. Allen, Rochester, MN, Ross M. Bremner, Phoenix, AZ, Donald E. Low, Seattle, WA, Mark B. Orringer, Ann Arbor, MI, and Michael J. Weyant, Aurora, CO

#### **Meet the Experts Session 2**

Room 113

## Minimally Invasive and Robotic Mitral Valve Repair

Faculty: Joseph A. Dearani, Rochester, MN, James S. Gammie, Baltimore, MD, A. Marc Gillinov, Cleveland, OH, and Joseph Lamelas, Houston, TX

#### Meet the Experts Session 3

Room 122

## Universal Conundrums in ECMO: Tips and Tricks for Veno-Arterial ECMO in Cardiogenic Shock

Faculty: Robert H. Bartlett, Ann Arbor, MI, Christian A. Bermudez, Philadelphia, PA, David A. D'Alessandro, Boston, MA, David M. McMullan, Seattle, WA, Rita C. Milewski, Philadelphia, PA, and Jeffrey A. Morgan, Houston, TX

## **Meet the Experts Session 4**

Room 222

#### **Advanced Surgical Techniques in Ischemic Heart Disease**

Faculty: Richard L. Prager, Ann Arbor, MI, John D. Puskas, New York, NY, and Joseph F. Sabik III, Cleveland, OH

#### Meet the Experts Session 5

Room 123

## How to Be Successful in a Small-to-Mid Size Congenital Heart Program

Faculty: Petros V. Anagnostopoulos, Madison, WI, S. Adil Husain, San Antonio, TX, Jack L. Myers, Hershey, PA, James S. Tweddell, Cincinnati, OH, and Joseph W. Turek, Iowa City, IA

### Meet the Experts Session 6

Room 118

#### **End-Stage Heart Failure**

Faculty: Jack G. Copeland, Redlands, CA, Marzia Leacche, Grand Rapids, MI, Yoshimura Naka, New York, NY, Francis D. Pagani, Ann Arbor, MI, Jay D. Pal, Aurora, CO, Martin Strueber, Newark, NJ, and John M. Stulak, Rochester, MN

## **Meet the Experts Session 7**

Room 119

#### **Management of the Small Aortic Root**

Faculty: Kevin D. Accola, Orlando, FL, Michael J. Mack, Plano, TX, Robert K. Salley, Lexington, KY, Paul Stelzer, New York, NY, and Vinod H. Thourani, Washington, DC



## **Meet the Experts Session 8**

Room 114

Minimally Invasive Esophageal and Pulmonary Procedures, Including Robotics and POEM

Faculty: Robert J. Cerfolio, New York, NY, and James D. Luketich, Pittsburgh, PA

7:30 AM - 8:30 AM

Rooms 220-221

## **Health Policy Forum**

The Changing Medicare Quality Reporting and Payment Landscape

Moderator: Stephen J. Lahey, Farmington, CT

9:00 AM - 3:30 PM

Halls ABC, First Floor

#### **Exhibit Hall**

9:00 AM - 5:00 PM

Third Floor Concourse

#### **Scientific Posters**

9:00 AM - 12:00 PM

**Grand Ballroom** 

#### **General Session II**

Moderators: Richard L. Prager, Ann Arbor, MI, and Joseph F. Sabik III, Cleveland, OH

9:00 AM Thomas B. Ferguson Lecture

10:00 AM BREAK—Visit Exhibits and Scientific Posters

10:45 AM Award Presentations

11:00 AM C. Walton Lillehei Lecture: The Philosophical Breakfast

Club and the Invention of the Modern Scientist

Laura J. Snyder, New York, NY

12:00 PM - 1:00 PM

#### **BREAK**—Visit Exhibits and Scientific Posters

12:00 рм – 1:00 рм

Palm Ballroom A, Second Floor

## Residents Luncheon

1:00 рм – 3:00 рм

Room 315

#### **Adult Cardiac: General**

Moderators: Kendra J. Grubb, Louisville, KY, and Jennifer S. Lawton, Baltimore, MD

1:00 PM ABSTRACT: Tricuspid Valve Reconstruction for Infective Endocarditis

F. Bakaeen

Cleveland Clinic, OH

1:15 PM ABSTRACT: Contemporary Surgical Management of Hypertrophic Cardiomyopathy in the United States

L. Wei

West Virginia University, Morgantown

1:30 PM ABSTRACT: Model for End-Stage Liver Disease Score Independently Predicts Mortality in Cardiac Surgery

B. Young

Eastern Virginia Medical School, Norfolk



## **TUESDAY, JANUARY 30**

1:45 PM ABSTRACT: Ideal Therapeutic Approach for Mitral Valve Prolapse in Patients With Previous Cardiac Surgery: Open vs MitraClip Repair

S. Maltais

Mayo Clinic, Rochester, MN

2:00 PM ABSTRACT: Evolving Technique for Pericardiectomy:

Safety, On-Pump Surgery, and Complete Resection

D. R. Johnston Cleveland Clinic, OH

2:15 PM Image-Guided Mitral Valve Surgery

Daniel Drake, Traverse City and Ann Arbor, MI

2:30 PM TBD

1:00 PM – 3:00 PM Floridian Ballroom A

## **Adult Cardiac: Mitral and Tricuspid Valves**

Moderators: Gorav Ailawadi, Charlottesville, VA, and T. Sloane Guy, New York, NY

1:00 PM ABSTRACT: National Outcome Benchmarks for Mitral Valve Reoperations in the United States

A Kilio

University of Pennsylvania, Philadelphia

1:15 PM ABSTRACT: Mitral Valve Repair vs Replacement With

Complete Preservation of the Subvalvular Apparatus in the Elderly With Degenerative Disease: An Analysis of the

STS Adult Cardiac Surgery Database

C. M. Vassileva

University of Massachusetts, Worcester

1:30 PM ABSTRACT: Robotic Mitral Valve Repair: Does Indication for Surgery Affect Outcomes?

S. Maltais

Mayo Clinic, Rochester, MN

1:45 PM ABSTRACT: A Comparison of Early Postoperative Results

Between Conventional Mitral Valve Repair and Transapical

**NeoChord Implantation** 

K. Rucinskas

Vilnius University, Lithuania

2:00 PM Update on World Experience With Transapical NeoChords

and Predictions for the Future

Gilbert H. L. Tang, New York, NY

2:15 PM ABSTRACT: Transcatheter Mitral Valve Replacement With

**LAMPOON Procedure** 

J. J. Kelly

Emory University, Atlanta, GA

2:30 PM DEBATE: Transcatheter vs Minimally Invasive Mitral Valve

**Procedures** 

Transcatheter Mitral Valve Repair and Replacement Is Our

Future: Michael A. Borger, New York, NY

Minimally Invasive Mitral Valve Procedures Will Prevail Over

Transcatheter Techniques: James S. Gammie, Baltimore, MD

1:00 PM - 3:00 PM Room 305

## Congenital: Pediatric Congenital II

Moderators: Michael E. Mitchell, Milwaukee, WI, and Christian Pizarro, Wilmington, DE

1:00 PM ABSTRACT: Outcomes After Bidirectional Cavopulmonary Shunt in Infants Less Than 120 Days Old

N. O.

Yokohama Kanagawa Children's Medical Center, Japan

1:15 PM Optimal Timing of Stage 2 Palliation for Hypoplastic Left Heart Syndrome

Robert D. B. Jaquiss, Dallas, TX

1:30 PM ABSTRACT: External Stenting for Vascular Compression

Syndrome M. Ando

Sakakibara Heart Institute, Tokyo, Japan

1:45 PM ABSTRACT: Characterizing Outcomes of Isolated and

Complex Complete Atrioventricular Septal Defect Repair: An All-Encompassing Experience

C. M. Mery

Texas Children's Hospital/Baylor College of Medicine, Houston

2:00 PM ABSTRACT: Detachment of the Tricuspid Valve in

Perimembranous Ventricular Septal Defect Closure Does Not Impact Tricuspid Valve Function at Long-Term Follow-Up

C. D. Fraser III

Johns Hopkins, Baltimore, MD

2:15 PM ABSTRACT: Mid-Term Outcomes of Common Atrioventricular Valve Repair in Patients With Single Ventricular Physiology

H. F. Fengpu

National Center for Cardiovascular Diseases, Beijing Fuwai Hospital, Chinese Academy of Medical Sciences, and Peking Union Medical College

2:30 PM ABSTRACT: Near-Normothermic Goal-Directed Innominate and Femoral Perfusion for Norwood Palliation of Hypoplastic Left Heart Syndrome

G. M. Hoffman

Children's Hospital and Medical College of Wisconsin, Milwaukee

2:45 PM ABSTRACT: Surgical Management and Outcomes of Ebstein Anomaly in Neonates and Infants: An Analysis of the STS Congenital Heart Surgery Database

K. A. Holst

Mayo Clinic, Rochester, MN

1:00 PM - 3:00 PM

Floridian Ballroom D

## EACTS @ STS: Bicuspid Aortic Valve Repair With Aortic Valve Insufficiency and Proximal Aortic Aneurysm Repair

Moderators: Joseph E. Bavaria, Philadelphia, PA and Ruggero De Paulis, Rome, Italy

1:00 PM Introduction: BAV Repair With Proximal Aortic Aneurysm: Essential Controversies Revealed

Joseph E. Bavaria, Philadelphia, PA



## **TUESDAY, JANUARY 30**

**ABSTRACT: David V Valve-Sparing Aortic Root** 1:12 PM Replacement Provides Equivalent Long-Term Outcomes in **Patients With Bicuspid and Trileaflet Aortic Valves** M. O. Kayatta Emory University, Atlanta, GA **DEBATE:** What Is the Best Operation for BAV AI With Root 1:24 PM Aneurvsm? Remodeling with External Subannular Ring: Emmanuel Lansac, Paris, France Reimplantation Root Procedure: Michael P. Fischbein, Stanford, CA 1:54 PM ABSTRACT: Predictors of Long-Term Functional Outcomes in Type I Bicuspid Aortic Valve Repair A. Habertheuer Hospital of the University of Pennsylvania, Philadelphia 2:06 PM Reimplantation and Valve Repair in BAV AI With Dilated **Root: Evolution of the Procedure and Decision Making** Gebrine El-Khoury, Brussels, Belgium 2:26 PM **Fundamental Controversies in BAV Repair With Root** Aneurysm Joseph E. Bavaria, Philadelphia, PA 2:46 PM ABSTRACT: Association Between Symmetric BAV Phenotypes and the Pattern of Valvular Dysfunction and **Bicuspid Aortopathy** Z. Z. Huang Peking Union Medical College, Beijing, China 1:00 PM - 3:00 PM Room 304 STS/ISHLT Joint Symposium: LVAD Therapy in 2018—Worldwide Perspectives Moderators: Jiri Maly, Prague, Czech Republic, and Gabriel Sayer, Chicago, IL On the Horizon: Recent LVAD Clinical Trial Results and 1:00 PM **Emerging Data** Nir Uriel, Chicago, IL 1:15 PM The HeartMate 3 LVAD in Europe: CE Mark and the **ELEVATE Registry** Finn Gustafsson, Copenhagen, Denmark IMACS: What Can Registries Teach Us About LVADs? 1:30 PM James K. Kirklin, Birmingham, AL **Panel Discussion** 1:45 PM Minimally Invasive Approach to LVAD Implantation 2:00 PM Nahush A. Mokadam, Seattle, WA 2:15 PM **Alternative Anticoagulation Strategies in LVAD Patients** Ivan Netuka, Prague, Czech Republic **Durable Biventricular Support Options in 2018** 2:30 PM Gert D. Pretorius, San Diego, CA

2:45 PM

**Panel Discussion** 

1:00 PM - 3:00 PM

Floridian Ballroom B-C

#### **General Thoracic: Lung Cancer II**

Moderators: Lisa M. Brown, Sacramento, CA, and Robert A. Meguid, Aurora, CO

1:00 PM Database Studies: Are They Worth the Paper They're Printed On?

Felix G. Fernandez, Atlanta, GA

1:15 PM ABSTRACT: Richard E. Clark Memorial Paper for General Thoracic Surgery: Use of Invasive Mediastinal Staging for Lung Cancer by STS National Database Participants

S. B. Krantz

NorthShore University Health System, Evanston, IL

Discussant: Mark S. Allen, Rochester, MN

1:30 PM ABSTRACT: Significant Variation in Compliance With Lung Cancer Quality Measures Exists Across US Hospitals

D. D. Odell

Northwestern University, Chicago, IL

1:45 PM ABSTRACT: Defining Proficiency for STS National Database Participants Performing Thoracoscopic Lobectomy V. Puri

. run

Washington University, St Louis

2:00 PM ABSTRACT: Postoperative Radiation Therapy Does Not Improve Survival When Added to Chemotherapy in Patients With Clinical N0, Pathological N2 Non-Small-Cell Lung Cancer After Resection

J. A. Drake

University of Tennessee Health Science Center, Memphis

2:15 PM ABSTRACT: The Role of Lymph Node Dissection in Carcinoids: A National Cancer Database Analysis

P.J. Kneuertz

NewYork-Presbyterian Hospital, Weill Cornell Medical College, NY

2:30 PM ABSTRACT: Is There a Role for Surgical Resection in Early Stage Sarcomatoid or Biphasic Mesothelioma? Result of a Propensity-Matched Analysis

S. S. Kim

University of Arizona, Tucson

2:45 PM ABSTRACT: Differences and Quality Indicators in Low- and High-Performing STS General Thoracic Surgery Database Participants

B. C. Tong

Duke University Medical Center, Durham, NC

1:00 pm – 3:00 pm Room 316

## **General Thoracic: Mediastinal/Pulmonary**

Moderators: Usman Ahmad, Cleveland, OH, and Christopher R. Morse, Boston, MA

1:00 PM ABSTRACT: Short-Term Outcomes of Tracheal Resection in the STS General Thoracic Surgery Database

B. P. Stanifer

Northwestern Memorial Hospital, Chicago, IL

## **TUESDAY. JANUARY 30**

**ABSTRACT: Comparison of Neoadjuvant Chemotherapy** 1:15 PM Followed by Surgery to Surgery Alone for Advanced

> Thymic Malignancies: A Propensity Score-Matching **Analysis Based on a Multicenter Database**

S Park

Seoul National University Hospital, South Korea

1:30 PM ABSTRACT: Induction Therapy Does Not Improve Survival

in Patients With Large Thymomas

D. Z. Liou

Stanford University, CA

1:45 PM **ABSTRACT: Accumulated Frailty Characteristics** 

> **Predict Postoperative Respiratory Failure in Patients** With Severe Tracheobronchomalacia Undergoing

Tracheobronchoplasty

D. H. Buitrago

Beth Israel Deaconess Medical Center, Boston

2:00 PM ABSTRACT: Left Cardiac Sympathetic Denervation for

Management of Long QT Syndrome: Single-Center 7-Year

**Experience** 

A. C. Antonopoulos

University College London Hospitals NHS Foundation Trust,

United Kingdom

ABSTRACT: Nerve-Sparing Surgery in Advanced Stage 2:15 PM

**Thymomas** 

V. Aprile

University of Pisa, Italy

Robotic Thymectomy: How I Do It 2:30 PM

Inderpal S. Sarkaria, New York, NY

**Surgery for Myasthenia Gravis** 2:45 PM

Joshua R. Sonett, New York, NY

1:00 PM - 5:30 PM Rooms 301-302

## Patient Safety Symposium: Biases and Errors—Why We Do What We

Moderators: W. Chance Conner, San Antonio, TX, and Michael S. Kent, Boston, MA

1:00 PM Introduction

W. Chance Conner, San Antonio, TX, and Michael S. Kent, Boston,

1:30 PM Surgical Practice and Evidence-Based Medicine: Why the

Incongruity?

Kevin W. Lobdell, Charlotte, NC

2:10 PM How Do We Make the Diagnosis? Biases and Heuristics in

Medicine

Geoffrey Norman, Hamilton, Canada

Panel Discussion/Q&A 2:50 PM

Break 3:10 PM

3:40 PM Cognition in the Wild (of the Operating Room)

David Woods, Columbus, OH



4:20 PM Break Root Cause Analysis: Is There a Right Way?

Juan A. Sanchez, Baltimore, MD

5:00 PM Panel Discussion/Q&A

3:00 PM - 3:30 PM

## **BREAK**—Visit Exhibits and Scientific Posters

3:30 PM - 4:30 PM Rooms 220-221

#### **Cardiothoracic Surgical Education**

Moderators: David D. Odell, Chicago, IL, and Rishindra M. Reddy, Ann Arbor, MI

3:30 PM ABSTRACT: Lessons Learned From a Multicenter
Prospective Randomized Study of Skill Acquisition in
Cardiovascular Surgery Using a Low-Fidelity Simulation
Platform

J. R. Spratt

University of Minnesota, Minneapolis

3:42 PM ABSTRACT: The Current State of Mentorship in Cardiothoracic Surgery Training: Results of the TSDA/TSRA In-Training Exam Survey

E. H. Stephens

Columbia University Medical Center, New York, NY

3:54 PM ABSTRACT: Role of Social Media in Mentorship: A
Comparative Analysis of Cardiothoracic Surgery and Other
Surgical Specialties

M. B. Antonoff

The University of Texas MD Anderson Cancer Center, Houston

4:06 PM ABSTRACT: Systematic Development, Implementation and Evaluation of an Annual Hands-on Educational Program for Minimally Invasive Cardiac Surgery

E. O. Ebunlomo

Houston Methodist Hospital, TX

4:18 PM ABSTRACT: Development and Initial Validation of a Cervical Esophagogastric Anastomosis Simulator

M. Orringer

University of Michigan, Ann Arbor

3:30 pm – 5:30 pm

Floridian Ballroom A

#### **Adult Cardiac: Aorta II**

Moderators: Jehangir J. Appoo, Calgary, Canada, and Edward P. Chen, Atlanta, GA

3:30 PM ABSTRACT: Early Clinical Outcomes of Hybrid Aortic
Arch and Frozen Elephant Trunk Reconstruction With the
Thoraflex Hybrid Graft: A Multicenter Experience From the
Canadian Thoracic Aortic Collaborative

M. Chu

Western University, London Health Sciences Centre, Canada

## **TUESDAY. JANUARY 30**

**ABSTRACT: Salvage Coronary Artery Bypass Predicts** 3:45 PM **Increased Mortality During Aortic Root Surgery** 

W. B. Keeling

Emory University, Atlanta, GA

4:00 PM **ABSTRACT: Clinical Value of Computational Fluid Dynamics in the Management of Aortic Pathologies: Looking Beyond the Experimental Application** 

D. M. Calcaterra

Minneapolis Heart Foundation at Abbott Northwestern Hospital, MN

4:15 PM **ABSTRACT: Residual Tears in the Arch Vessel Is a Potential Risk Factor for Major Adverse Aortic Events After Acute DeBakey Type I Aortic Dissection Repair** 

W. Heo

Yonsei University, Gangnam Severance Hospital, Seoul, South Korea

4:30 PM **DEBATE:** 55-Year-Old Patient Presenting With Acute Type A Aortic Dissection With Hemiplegia

> Aggressive Immediate Intervention: Thomas G. Gleason, Pittsburgh, PA

Expectant Management and Delayed Intervention: Anthony L. Estrera, Houston, TX

5:00 PM ABSTRACT: The Role of Multilayer Flow Modulator Stents in the Endovascular Treatment of Aortic Dissection: A Single-Center Experience

V. Costache

Polisano European Hospital, Sibiu, Romania

ABSTRACT: Axillary vs Femoral Cannulation in Acute Type 5:15 PM A Aortic Dissection: An International Consortium Report

O. A. Preventza

Baylor College of Medicine, Houston, TX

3:30 PM - 5:30 PM Floridian Ballroom D

#### **Adult Cardiac: Aortic Valve/Novel Technologies**

Moderators: Ibrahim Sultan, Pittsburgh, PA, and Wilson Y. Szeto, Philadelphia, PA

**ABSTRACT: Need for Permanent Pacemaker After** 3:30 PM **Aortic Valve Replacement Reduces Long-Term Survival:** Implications for Transcatheter Aortic Valve Replacement

R. B. Hawkins University of Virginia Health System, Charlottesville

ABSTRACT: Transcatheter Aortic Valve Replacement After 3:45 PM **Previous Mitral Valve Repair or Replacement Surgery:** Results From the STS/ACC Transcatheter Valve Therapy Registry

D. G. Cervantes

Emory University, Atlanta, GA

**ABSTRACT: Evolving Trends in Aortic Valve Replacement:** 4:00 PM A Statewide Experience

K. M. Kim

University of Michigan, Ann Arbor



4:15 PM ABSTRACT: Sutureless Aortic Valves in Elderly Patients
With Aortic Stenosis and Intermediate Risk Profile: Early
and Long-Term Outcomes

C. C. Muneretto

University of Brescia Medical School, Italy

4:30 PM ABSTRACT: Transcaval Transcatheter Aortic Valve Replacement for the Treatment of Subaortic Stenosis

J. J. Kelly

Emory University, Atlanta, GA

4:45 PM ABSTRACT: Geometric Changes in the Aortic Root
Complex With Annular Stabilization Techniques in
Type I Bicuspid Aortic Valve Repair: Valve-Sparing Root
Reimplantation vs Subcommissural Annuloplasty/External
Subannular Aortic Ring

Н. А. Ко

University of Pennsylvania, Philadelphia

5:00 PM DEBATE: Severe Symptomatic Aortic Insufficiency in a 50-Year-Old Patient With Non-Aneurysmal Bicuspid Aortic Valve

Isolated Valve Repair: Munir Boodhwani, Ottawa, Canada Mechanical Aortic Valve Replacement: Ibrahim Sultan,

Pittsburgh, PA

**Bioprosthetic Aortic Valve Replacement:** Michael J. Reardon, Houston, TX

3:30 PM - 5:30 PM Room 315

## Advanced Therapies for End-Stage Cardiopulmonary Disease

Moderators: Jonathan W. Haft, Ann Arbor, MI, and Bryan A. Whitson, Columbus, OH

3:30 PM Introduction

3:35 PM DEBATE: A Robust Shock/Temporary MCS System Can

Successfully Augment a Growing VAD Program

**Pro:** Pavan Atluri, Philadelphia, PA **Con:** Ashish Shah, Nashville, TN

3:55 PM Discussion

4:05 PM VAD Team Roles and Responsibilities

Simon Maltais, Rochester, MN

4:20 PM VAD Economics

Michael A. Acker, Philadelphia, PA

4:35 PM VAD Compliance and Certification

Michael F. McGrath, Norfolk, VA

4:50 PM How to Grow a VAD Program

Scott C. Silvestry, St Louis, MO

5:05 PM Momentum 3: Surgical Techniques in HeartMate 3 That

**Can Impact Quality** 

Chris T. Salerno, Carmel, IN

5:20 PM Discussion

3:30 PM - 5:30 PM Room 305

#### Congenital: Pediatric Congenital III

Moderators: S. Adil Husain, San Antonio, TX, and Kirk R. Kanter, Atlanta, GA

#### 3:30 PM ABSTRACT: Beating Heart Root Harvesting for En Bloc **Rotation of the Conotruncus**

P. Mvers

Geneva University Hospitals, Switzerland

#### **ABSTRACT: Late Results of Half-Turned Truncal Switch** 3:45 PM **Operation for Transposition of the Great Arteries With Left** Ventricular Outflow Obstruction

H. Hongu

Kyoto Prefectural University of Medicine, Japan

#### ABSTRACT: Senning With Aortic Translocation, Anatomic 4:00 PM Repair for Congenitally Corrected Transposition With **Ventricular Septal Defect, and Pulmonic Stenosis**

V. K. Tam

Cook Children's Medical Center, Fort Worth, TX

#### **ABSTRACT: Long-Term Outcomes of Coarctation Repair via** 4:15 PM **Left Thoracotomy**

M. R. Gropler

Washington University in St Louis College of Medicine, MO

#### 4:30 PM ABSTRACT: Extra-Anatomic Bypass for Complex Adult **Coarctation With Distal Arch Aneurysm and Anomalous Left Subclavian Artery**

E. N. Feins

Massachusetts General Hospital, Boston

#### **ABSTRACT: Posterior Leaflet Augmentation for Mitral** 4:45 PM Valve Regurgitation in Children: A Standardized Approach

G. Brancaccio

Bambino Gesù Children's Hospital, Rome, Italy

#### ABSTRACT: Tetralogy of Fallot Repair in Developing 5:00 PM Countries: Results From the International Quality Improvement Collaborative

N. F. Sandoval

Fundacion Cardio-Infantil, Bogota, Colombia

#### ABSTRACT: Symptomatic Tetralogy of Fallot in the First 2 5:15 PM Months of Life: Comparison Between Repair vs Shunt

Y. M. Menaissy

Cairo University, Mohandesseen, Egypt

3:30 PM - 5:30 PM Room 316

## ESTS @ STS: Controversial Issues in General Thoracic Surgery— **Perspectives From Europe and North America**

Moderators: Janet P. Edwards, Calgary, Canada, and Kostas Papagiannopoulos, Leeds, United Kingdom

#### 3:30 PM Surgical Management of Pulmonary Metastases: The **European Perspective**

Tom Treasure, London, United Kingdom





Surgical Management of Pulmonary Metastases: The 3:40 PM

> **North American Perspective** Mark W. Onaitis, La Jolla, CA

**Panel Discussion/Questions** 3:50 PM

4:00 PM Management of Malignant Pleural Mesothelioma: The

**European Perspective** 

Isabelle Opitz, Zurich, Switzerland

4:10 PM Management of Malignant Pleural Mesothelioma: The

> **North American Perspective** David J. Sugarbaker, Houston, TX

Panel Discussion/Questions 4:20 PM

4:30 PM Surgery in Small Cell Lung Cancer: The European

> **Perspective** Clemens Aigner, Essen, Germany

4:40 PM Surgery in Small Cell Lung Cancer: The North American

**Perspective** 

4:50 PM

David Harpole, Durham, NC Panel Discussion/Questions

**Chest Wall Tumors From Diagnosis to Reconstruction: The** 5:00 PM

**European Perspective** 

Kostas Papagiannopoulos, Leeds, United Kingdom

5:10 PM **Chest Wall Tumors From Diagnosis to Reconstruction: The** 

> **North American Perspective** Stephen D. Cassivi, Rochester, MN

5:20 PM Panel Discussion/Questions

3:30 PM - 5:30 PM Floridian Ballroom B-C

### **General Thoracic: Esophageal**

Moderators: Farhood Farjah, Seattle, WA, and James D. Luketich, Pittsburgh, PA

**ABSTRACT: Complications After Esophagectomy Are** 3:30 PM

Associated With Extremes of Body Mass Index: An STS

**National Database Study** 

B. A. Mitzman

The University of Chicago, IL

**ABSTRACT: Detection of Tumor-Specific Mutations in** 3:45 PM

Plasma DNA: A Potential Esophageal Adenocarcinoma

**Biomarker** 

M. R. Egyud

Boston Medical Center, MA

**ABSTRACT: Consequences of Refusing Surgery for** 4:00 PM

**Esophageal Cancer: A National Cancer Database Analysis** 

M. Rahouma

Weill Cornell Medical College, New York, NY

ABSTRACT: Racial Disparity in Utilization of High-Volume 4:15 PM

**Hospitals for Surgical Treatment of Esophageal Cancer** 

**Patients** 

S. S. Rehmani

Mount Sinai St Luke's Hospital, New York, NY



4:30 PM ABSTRACT: Choice of Neoadjuvant Therapy for Locally Advanced Esophageal Cancer Should Be Targeted to Tumor Histology

S. W. Harrison

Weill Cornell Medicine, New York, NY

4:45 PM ABSTRACT: Does the Approach Matter? An Analysis of 9353 Patients in the National Cancer Database Comparing Survival and Outcomes of Robotic, Minimally Invasive, and Open Esophagectomies

F. E. Espinoza-Mercado

Cedars-Sinai Medical Center, Los Angeles, CA

5:00 PM ABSTRACT: Volume-Outcome Relationship in Minimally Invasive Esophagectomy

H. V. Salfity

Indiana University School of Medicine, Indianapolis

5:15 PM ABSTRACT: Outcomes of Octogenarians With Esophageal Cancer: An Analysis of the National Cancer Database

A. C. Salami

Albert Einstein Medical Center, Philadelphia, PA

4:30 PM - 5:30 PM

Room 304

#### **Quality Improvement**

Moderator: Vinay Badhwar, Morgantown, WV

4:30 PM ABSTRACT: Development and Validation of a Risk Prediction Model for In-Hospital Stroke After Transcatheter Aortic Valve Replacement From the STS/ACC TVT Registry

V. H. Thourani

MedStar Heart and Vascular Institute/Washington Hospital Center, Washington, DC

4:45 PM ABSTRACT: Socioeconomic "Distressed Communities Index" Predicts Risk-Adjusted Operative Mortality After Coronary Artery Bypass Grafting

E. I. Charles

University of Virginia Health System, Charlottesville

5:00 PM ABSTRACT: Comparison of the Efficacy and Cost of Awake Thoracoscopy and Video-Assisted Thoracoscopic Surgery in Undiagnosed Pleural Effusion

C. M. McDonald

University Health Network, Toronto, Canada

5:15 PM ABSTRACT: Successful Strategies to Reduce 30-Day Readmission After Coronary Artery Bypass Graft Surgery

J. Benuzillo

Intermountain Heart Institute, Salt Lake City, UT



## **WEDNESDAY, JANUARY 31**

6:30 AM - 9:30 AM

Hall D Lobby, First Floor

#### **Registration & Breakfast**

7:00 AM - 9:00 AM and repeated 9:30 AM - 11:30 AM

Hall D. First Floor



STS University courses feature only hands-on learning. No didactic lectures will be given during the activity, so attendees are encouraged to access the lectures prior to Wednesday morning at www.sts.org/stsuniversity.

#### **Course 1: Essentials of TAVR**

Course Directors: Basel Ramlawi, Winchester, VA, and George Zorn, Kansas City, KS

Faculty: William T. Brinkman, Plano, TX, Kevin L. Greason, Rochester, MN, Jefferson Lyons, Columbus, OH, S. Chris Malaisrie, Chicago, IL, Hersh S. Maniar, St Louis, MO, Himanshu J. Patel, Ann Arbor, MI, and Liam P. Ryan, Alexandria, VA

### **Course 2: TEVAR and Aortic Arch Debranching Procedures**

Course Directors: Ali Khoynezhad, Los Angeles, CA, and Ourania A. Preventza, Houston, TX

Faculty: Derek R. Brinster, New York, NY, Ankur Gupta, Long Beach, CA, Sepehre Naficy, New York, NY, and Rodney A. White, Long Beach, CA

#### **Course 3: Mitral Valve Repair**

Course Directors: Steven F. Bolling, Ann Arbor, MI, and Evelio Rodriguez, Nashville, TN

Faculty: W. Randolph Chitwood Jr, Greenville, NC, A. Marc Gillinov, Cleveland, OH, T. Sloane Guy, New York, NY, and Matthew A. Romano, Ann Arbor, MI

#### **Course 4: Valve-Sparing Aortic Root Replacement**

Course Directors: Duke E. Cameron, Baltimore, MD, Edward P. Chen, Atlanta, GA, and Bo Yang, Ann Arbor, MI

Faculty: Jeffrey Brawn, Baltimore, MD, Ruggero De Paulis, Rome, Italy, G. Michael Deeb, Ann Arbor, MI, Philip J. Hess Jr, Indianapolis, IN, Melissa Jones, Baltimore, MD, Bradley G. Leshnower, Atlanta, GA, and Luca A. Vricella, Baltimore, MD

### Course 5: Aortic Root Enlargement Procedures and Aortic Valve Leaflet Reconstruction

Course Directors: S. Adil Husain, San Antonio, TX, and Prashanth Vallabhajosyula, Philadelphia, PA

Faculty: Arminder Singh Jassar, Boston, MA, Alberto Pochettino, Rochester, MN, Edward Y. Sako, San Antonio, TX, and Ibrahim Sultan, Pittsburgh, PA

## WEDNESDAY, JANUARY 31

#### Course 6: VATS Lobectomy

Course Directors: DuyKhanh P. Ceppa, Indianapolis, IN, and Betty C. Tong, Durham, NC

Faculty: Mark F. Berry, Stanford, CA, Shanda H. Blackmon, Rochester, MN, William R. Burfeind, Bethlehem, PA, Todd L. Demmy, New Brunswick, NJ, Janet P. Edwards, Calgary, Canada, Jacob A. Klapper, Durham, NC, Jeremiah Martin, Portsmouth, OH, Jacob R. Moremen, Jackson, MS, Scott I. Reznik, Dallas, TX, and Paula A. Ugalde, Quebec, Canada

#### Course 7: Advanced Open Esophageal and Tracheal Procedures

Course Directors: Sidharta P. Gangadharan, Boston, MA, and Sandra L. Starnes, Cincinnati, OH

Faculty: Scott M. Atay, Los Angeles, CA, Andrew C. Chang, Ann Arbor, MI, Alberto de Hoyos, Dallas, TX, Robert E. Merritt, Columbus, OH, John D. Mitchell, Aurora, CO, Karen M. Rieger, Indianapolis, IN, K. Robert Shen, Rochester, MN, and Jennifer L. Wilson, Boston, MA

#### Course 8: Chest Wall Resection, Reconstruction, and Pectus Surgery

Course Directors: Dawn E. Jaroszewski, Phoenix, AZ, Daniel L. Miller, Marietta, GA, and Mathew Thomas, Jacksonville, FL

Faculty: Staci Beamer, Phoenix, AZ

## Course 9: Minimally Invasive Aortic and Mitral Valve Surgery

Course Directors: Tom C. Nguyen, Houston, TX, and Vinod H. Thourani, Washington, DC

Faculty: Kuan-Ming Chiu, Taipei, Taiwan, Borut Gersak, Ljubljana, Slovenia, Mattia Glauber, Milan, Italy, Peter A. Knight, Rochester, NY, Eric J. Lehr, Seattle, WA, and Juan P. Umaña, Bogotá, Colombia

### Course 10: POEM Skills

Course Directors: Ralph W. Aye, Seattle, WA, and Inderpal S. Sarkaria, Pittsburgh, PA

Faculty: Lara W. Schaheen, Pittsburgh, PA, and Jon O. Wee, Boston, MA



The information listed here is accurate as of December 1, 2017. The information for these products and services was provided by the manufacturers, and inclusion in this publication should not be construed as a product endorsement by STS.

## A&E Medical Booths: 625, 925 Farmingdale, NJ

A&E Medical's products include MYO/Wire® temporary pacing wires, MYO/Wire II sternum wires, MYO/Punch rotating surgical punch, MYO/Lead disposable patient cable, and DoubleWire high-strength sternal closure system.

## Abbott Booth: 1325 Santa Clara, CA

Abbott is committed to helping people live their best life through the power of health. For more than 125 years, Abbott has brought new technologies to the world—in nutrition, diagnostics, medical devices, and branded generic pharmaceuticals—that create more possibilities for more people at all stages of life.

## Abiomed Inc Booth: 213 Danvers, MA

Abiomed (NASDAQ: ABMD) is a leading provider of medical devices that provide circulatory support. Its products are designed to enable the heart to rest by improving blood flow and/or performing the pumping of the heart.

### ACUTE Innovations Booth: 1625 Hillsboro, OR

Furthering its reputation as a leader in the thoracic industry, ACUTE Innovations® introduces a new addition to its portfolio, RibLoc® U Plus 90 Instrumentation. The U Plus 90 Instrumentation system works in conjunction with the RibLoc® U Plus Chest Wall Plating system, which features a unique U-shape design to aid in placement on the rib.

## All Star Recruiting Booth: 218 Deerfield Beach, FL

All Star Recruiting has been providing professional placement services and proven results to hospitals, physician groups, and practice management organizations since 2003. The company currently services physician and advance practice needs for both locum tenens and permanent medical positions.

## American Association for Thoracic Surgery Booth: 825 Beverly, MA

Founded in 1917, the American Association for Thoracic Surgery is dedicated to excellence in research, education, and innovation in cardiothoracic surgery and has become an international professional organization.

## AngioDynamics Booth: 1624 Latham, NY

A leading provider of innovative, minimally invasive medical devices used by professional health care providers for vascular access, surgery, peripheral vascular disease, and oncology. AngioDynamics's diverse product lines include market-leading fluid management systems, angiographic products, thrombolytic products, and venous products. More information is available at www.AngioDynamics.com.

### **EXHIBITOR LISTING**

## Astute Medical, Inc San Diego, CA

Astute Medical, manufacturer of the NephroCheck Test®, is dedicated to improving the diagnosis of high-risk medical conditions and diseases through the identification and validation of protein biomarkers to serve as the basis for novel diagnostic tests. The company's focus is community and hospital-acquired acute conditions that require rapid diagnosis/risk assessment, such as acute kidney injury and sepsis.

Booth: 730

Booths: 118, 124

AtriCure Inc Booth: 1407
Mason, OH

AtriCure Inc is a medical device company that provides innovative solutions designed to decrease the global atrial fibrillation (Afib) epidemic. AtriCure's Synergy<sup>TM</sup> Ablation System is the first and only surgical device approved for the treatment of persistent and longstanding persistent forms of Afib in patients undergoing certain open concomitant procedures.

Auris Surgical Robotics San Carlos, CA

Bard Davol Booth: 800 Warwick, RI

Bard is the market leader in comprehensive soft tissue reconstruction. In addition to this extensive suite of products, the company's BioSurgery franchise is delivering a growing line of enhanced sealants and hemostatic products to complement surgical techniques across thoracic, cardiovascular, and other surgical specialties.

Baxter Booth: 1113
Deerfield, IL

Baxter's BioSurgery business unit offers a comprehensive line of biologic and synthetic products that advance surgical care. BioSurgery specializes in intraoperative wound and tissue management and aims to improve surgical practice. The portfolio comprises products for hemostasis, sealing, staple line reinforcement, soft tissue repair, and bone graft substitution.

Baylis Medical Booth: 1527 Mississauga, Canada

Baylis Medical develops and markets high-technology medical devices used in the fields of interventional cardiology and interventional radiology. The company's vision is to develop and market innovative medical therapies while improving the lives of people around the world. Baylis has offices in Montreal, Toronto, Boston, and London.

BD Booths: 1316, 1221

#### Franklin Lakes, NJ

BD is a global medical technology company advancing health by improving discovery, diagnostics, and care delivery. The company's innovative product portfolio, leadership, and partnerships help make a difference for global health care.

Booth: 1103

Booth: 214

### Berlin Heart Inc The Woodlands, TX

Berlin Heart is the only company worldwide that develops, manufactures, and distributes ventricular assist devices for patients of every age and body size. EXCOR® Pediatric provides medium- to long-term circulatory support specifically for infants and children awaiting heart transplants. EXCOR Pediatric is approved for use in the United States under Humanitarian Device Exemption regulations by the Food and Drug Administration.

BFW Inc Booth: 1005

## Louisville, KY

BFW is a worldwide technological leader in surgical illumination and headlight video imaging. Experience the foremost innovations in bright, portable, OR quality LED headlights, the new Hatteras™ LED light source—unmatched intense illumination for headlights and instrumentation, and state-of-the-art Pharos HD™ coaxial headlight/video imaging system.

## BioStable Science & Engineering Austin, TX

BioStable Science & Engineering is developing and commercializing proprietary valve repair technologies that provide an alternative to valve replacement for aortic valve disease. The company's HAART Aortic Annuloplasty Devices are designed to simplify and standardize aortic valve repair for patients undergoing surgery for aortic insufficiency or root aneurysm.

Boston Medical Products, Inc Booth: F06

Shrewsbury, MA

Boston Scientific Booth: 1024

Minneapolis, MN

## Cardiac Surgical Unit Advanced Life Support Booth: 1219 Simpsonville, KY

Cardiac Surgical Unit Advanced Life Support (CSU-ALS) is the leading provider of CSU-ALS training in the US, Canada, and Mexico. It is the sole distributor of the CSU-ALS manikin. CSU-ALS can bring training to your hospital and team, or your team members attend national provider and trainer courses. Course completion results in CSU-ALS Certification, which is based on a 2-year renewal cycle.

Centese Booth: F01

#### Omaha, NE

Centese is the producer of Thoraguard<sup>TM</sup>, an intelligent surgical drainage system designed to address the needs of cardiac and thoracic surgeons.

ClearFlow Booth: 833

#### Anaheim, CA

ClearFlow's mission is to support best practices and develop guidelines to prevent chest tube occlusions. ClearFlow's PleuraFlow ACT System is the only 510K cleared device indicated for the removal of retained blood and the proactive maintenance of chest tube patency after cardiac surgery, resulting in improved patient outcomes and lower health care costs.

### **EXHIBITOR LISTING**

## Congenital Heart Surgeons' Society Beverly, MA

The Congenital Heart Surgeons' Society is the world's leading congenital heart surgeons' society. The 2018 CHSS Annual Meeting will be held October 21-22 at the Loews O'Hare Hotel in Chicago. www.chss.org

Booth: 934

Booth: 1101

Booth: 224

Booth: 1017

## Cook Medical Bloomington, IN

Since 1963, Cook Medical has worked closely with physicians to develop technologies that eliminate the need for open surgery. A leader in the advancement of diagnostic and therapeutic products for vascular disease, Cook continues a tradition of innovation with comprehensive device offerings in EVAR, leg therapies, PE prevention, and embolization.

### CorMatrix Booth: 631 Roswell. GA

CorMatrix® Cardiovascular markets its ECM® Bioscaffold devices for vascular repair, pericardial repair and reconstruction, cardiac tissue repair, and CanGaroo ECM Envelope for CIEDs. CorMatrix ECM Technology allows surgeons to restore the native anatomy of cardiac and vascular tissue in need of repair, serving as a superior alternative to synthetic or cross-linked materials.

## Cox Health Springfield, MO

## CryoLife Kennesaw, GA

CryoLife, Inc® is one of the world's leading contemporary medical device companies, providing preserved human cardiac and vascular tissues, surgical adhesives and sealants, prosthetic heart valves, cardiac lasers, and other medical devices. Since the company's inception in 1984, it is estimated that its products and tissues have helped more than 1 million patients worldwide.

## CT Assist Booth: 209 Philippi, WV

CT Assist is a managed service provider of cost-effective cardiothoracic surgery advanced practitioners who deliver quality care. CT Assist provides workforce management solutions from long-term and recruiting to locum tenens and vacation coverage. It is a physician assistant-owned nationwide employer of talented and experienced cardiothoracic PAs and nurse practitioners.

## CTSNet Booth: 1013 Chicago, IL

CTSNet (www.ctsnet.org) is the leading international source of online resources related to cardiothoracic surgery, as well as the major hub of the international online community of cardiothoracic surgeons and allied health care professionals. CTSNet's mission is to "connect the global cardiothoracic community."

## Designs for Vision Booth: 1104 Bohemia, NY

Just See  $It^{TM}$  with Designs for Vision's lightweight custom-made surgical telescopes, available with Nike® frames. See It Even Better<sup>TM</sup> with the L.E.D. Daylite® or Twin Beam®, providing the brightest and safest untethered illumination. Introducing the L.E.D. Daylite® Nano Cam HD—document the procedure with HD video from your perspective.

EBM Booth: 1619

## Tokyo, Japan

EBM, a biomedical spin-out venture company from Japan, provides the original beating heart simulator and quantitative assessment system for off-pump coronary artery bypass grafting and vascular anastomosis worldwide. Skill assessment is based on rapid CFD technology and validated silicone vascular model.

## Eclipse Loupes and Products Booth: 1529 Orchard Park. NY

Eclipse offers the highest quality surgical loupes and lights at the lowest prices. The company backs its products with an industry-leading lifetime warranty.

### Edwards Lifesciences Booth: 513 Irvine, CA

Edwards Lifesciences is the global leader in the science of heart valves and hemodynamic monitoring. Driven by a passion to help patients, the company partners with clinicians to develop innovative technologies in the areas of structural heart disease and critical care monitoring, enabling them to save and enhance lives. Additional company information can be found at www.edwards.com.

Elsevier Booth: 624 Philadelphia, PA

Elsevier is the proud publisher of *The Annals of Thoracic Surgery* and a world-leading provider of information solutions that enhance the performance of science, health, and technology professionals. Elsevier empowers better decision making and the delivery of better care. www.elsevier.com

Essentia Health Booth: 228
Duluth, MN

## Essential Pharmaceuticals Booth: 207 Durham, NC

Supporting the preservation of human systems. Originally developed for cardiac surgery, Custodiol® HTK offers superior convenience, water-like viscosity, and no need for additives or filters, which makes it a preferred solution for many transplant centers.

## European Association for Cardio-Thoracic Surgery Booth: 926 Windsor, United Kingdom

EACTS is the largest European association devoted to the practice of cardiothoracic surgery. The main objectives of the association are to advance education in the field of cardiothoracic surgery and to promote, for the public benefit, research into cardiovascular and thoracic physiology and therapy and to correlate and disseminate the useful results thereof. Visit booth 926 for more information.

## European Society of Thoracic Surgeons Booth: 929 Exeter, United Kingdom

ESTS is the largest international general thoracic surgery organization with more than 1600 members from all continents. The society's mission is to improve quality in the specialty, from clinical and surgical management of patients to education, training, and credentialing of thoracic surgeons worldwide. The 26th European Conference on General Thoracic Surgery will be held on 27-30 May 2018, in Ljubljana, Slovenia. www.ests.org

## Fehling Surgical Acworth, GA

Fehling Surgical Instruments, Inc is the leader in fine crafted surgical instrumentation that has focused on cardiovascular surgery for more than 30 years. The company features minimally invasive valve sets, including NEW retractor designs for unmatched atrial exposure of the left atrium. The CERAMO and Superplast instruments are designed specifically for cardiovascular procedures (needle holders, forceps, clamps, and MICS).

Booth: 1001

## Frymire Associates Medical Market Research Booth: F07 Menlo Park, CA

Frymire Associates is a network of experienced medical device market professionals who specialize in conducting exploratory and qualitative research with leading physicians from a variety of specialties. Frymire Associates' services encompass qualitative methods, such as in-depth interviews and focus groups, studies fielded at major medical meetings, and web-based research.

## General Cardiac/Heart Hugger Booth: 832 San Jose, CA

The Heart Hugger Sternum Support Harness is a patient-operated support harness applied postoperatively to splint surgical wounds. Benefits include improved patient compliance, faster return to premorbid respiratory levels, fewer wound complications, and better postoperative mobility. It is useful for open heart surgery, thoracotomy, fractured rib, and other chest trauma patients.

## General Thoracic Surgical Club Booth: 332 Zumbrota, MN

Founded in 1988, the General Thoracic Surgical Club is a not-for-profit organization representing more than 325 general thoracic surgeons worldwide who are dedicated to ensuring the best possible outcomes for surgical procedures of the lung, mediastinum, esophagus, and chest wall by providing the highest quality patient care through education, research, and clinical experience.

## Genesee BioMedical Booth: 1100 Denver, CO

Design Beyond Standard. Genesee BioMedical, Inc provides unique devices for cardiac surgery, including annuloplasty for mitral and tricuspid repair, sternal/thoracic valve retractors, instruments for minimally invasive aortic, transcatheter aortic valve implantation, and robotic surgeries, as well as coronary graft markers, suture guards, retraction clips, and myocardial needles. www.geneseebiomedical.com

## Getinge Booth: 604 Wayne, NJ

Getinge is a leading global provider of innovative solutions for operating rooms, intensive care units, hospital wards, sterilization departments, and life science companies and institutions. Based on first-hand experience and close partnerships, Getinge offers innovative health care solutions that improve everyday life for people today and tomorrow.

Booth: 1406

Booth: 1628

Booth: 1525

Booth: F03

Booth: 1425

## Gore & Associates Flagstaff, AZ

The Gore Medical Products Division has provided creative solutions to medical problems for 3 decades. More than 35 million Gore medical devices have been implanted worldwide. Products include vascular grafts, endovascular and interventional devices, surgical materials, and sutures for use in vascular, cardiac, and general surgery. For more information, visit www.goremedical.com.

## G.S. Innovations Las Vegas, NV

G.S. Innovations provides a variety of health care solutions to many different industries. The company develops and identifies the best medical care to help diverse professional groups overcome their challenges.

## Hackensack Meridian Health Wall, NJ

Hackensack Meridian Health is a leading, not-for-profit health care network in New Jersey offering a complete range of medical services, innovative research, and life-enhancing care aiming to serve as a national model for changing and simplifying health care delivery through partnerships with innovative companies and focusing on quality and safety.

### Hayes Locums Fort Lauderdale, FL

Hayes Locums provides physician search services—both temporary and permanent placement—to health care institutions across the United States. Hayes Locums was founded on the need to improve health care consulting services to the physician and health care communities. The company is proud to provide these services with the utmost integrity, which physicians and clients have grown to trust.

HCA Booth: 937

#### Brentwood, TN

HCA owns and operates more than 170 hospitals across the United States, making it one of the nation's leading providers of health care services. HCA believes that exceptional patient outcomes only come through a dedicated community of care, placing physicians at the forefront.

## Heart Hospital Baylor Plano, The Plano, TX

The Heart Hospital Baylor Plano is a cardiovascular specialty hospital in North Texas that opened in 2007. Over the past 10 years, its quality outcomes and guest satisfaction scores have garnered recognition, praise, and accolades from international giants in the health care field. Visit TheHeartHospitalBaylor.com to learn more.

## Heart Valve Society Booth: 932 Beverly, MA

The Heart Valve Society held its inaugural meeting in May 2015 at the Grimaldi Forum in Monte Carlo, Monaco, with more than 430 medical professionals, plus 80 industry partners. Whether you are a cardiologist, surgeon, researcher, or another member of the crucial valve disease treatment team, the HVS welcomes you to become a part of something very unique. Membership is available online.

## International Society for Minimally Invasive Cardiothoracic Surgery

#### Beverly, MA

ISMICS: Innovation, Technologies, and Techniques in Cardiothoracic and Cardiovascular/Vascular Surgery. 2018 ISMICS Annual Scientific Meeting, 13-16 June 2018, Westin Bayshore, Vancouver, Canada. ismics.org

Booth: 924

Booth: 108

Booth: 814

### Interpace Diagnostics Parsippany, NJ

Interpace Diagnostics is a public molecular diagnostics company providing specialty molecular tests focused primarily on thyroid, esophageal, pancreatic, and lung cancer. The company's most recently launched product is MVPdx for Lung Cancer, which differentiates local recurrence of cancer vs formation of new primary tumors. Interpace also offers ThyGenX, ThyraMIR, PancraGEN, and BarreGEN.

## Intuitive Surgical Sunnyvale, CA

Intuitive Surgical, Inc designs, manufactures, and distributes the da Vinci® Surgical System, technology designed to allow surgeons to perform many complex procedures minimally invasively.

## JACE Medical Booth: 1715 Warsaw, IN

JACE Medical pioneered the world's first rigid sternal closure system applied presternotomy: the Grand Pre®. JACE Medical is a company and culture committed to creating innovative, transformational technologies that facilitate optimal patient treatment, recovery, and future wellness. Visit Booth 1715 and see how the company "thinks outside the paradox." Get more information at JACEMED.com.

## Jinwha Medical Booth: F08 Cheongju-si, South Korea

## Johnson & Johnson Medical Device Companies Booths: 1203, 1213 New Brunswick, NJ

Having made significant contributions to surgery for more than a century, the Johnson & Johnson Medical Devices Companies are in the business of reaching more patients and restoring more lives. The group represents Ethicon US, LLC, NeuWave Microwave Ablation, and DePuy Synthes.

### Just Co, Ltd Booth: 1337 Torrance, CA

Only a dedicated plating company can provide "the strongest diamond plating" technology. The company can designate the plated layer, which anchors the diamond base on purpose. Its technology is unique and popular to those in the medical field in need of microsurgery instruments and endoscope tips.

## Kapp Surgical Booth: 731 Cleveland, OH

Kapp Surgical is a custom design shop that designs surgical instruments and implants, manufactures them, and sells them, as well as distributes domestically and internationally. Kapp's exclusive products include the Cosgrove Heart Retractor, Strip T's surgical organizer, and countless surgical devices, all FDA approved with several pending approval.

Booth: 312

## Karl Storz Endoscopy El Segundo, CA

Karl Storz offers solutions for thoracic surgery, including slender, easily dismantled MediaFIT instruments that offer economic solutions for mediastinoscopy. The ENDOCAMELEON® Telescope allows surgeons to adjust viewing directions from 0° to 120° without changing telescopes. The IMAGE1  $S^{TM}$  Camera Architecture System provides brilliant, natural color rendition and innovative visualization capabilities.

## Kaweah Delta Health Care District Booth: 226 Vislia, CA

Kaweah Delta Health Care District, totaling 581 beds, plays a key role in the health and well-being of California's great Central Valley. For nearly 55 years, it has provided a wide array of state-of-the-art and nationally recognized services. In partnership with Golden State Cardiac & Thoracic Surgery, Kaweah Delta has been recognized by Healthgrades as America's 50 Best in Cardiac Surgery!

## Kinamed Inc Booth: 1533 CAMArillo, CA

Visit Kinamed's booth to view a demonstration of the SuperCable®, Polymer Iso-Elastic™ Sternal Closure system, which solves limitations of metal cable, wire, and plating systems. SuperCable provides a dual strand footprint, which reduces cut-through. It elastically absorbs load and maintains compression. The low-profile clasp minimizes palpability, and the polymer cable allows for quick re-entry.

## KLS Martin Booth: 901 Jacksonville, FL

KLS Martin, a responsive company, is focused on the development of innovative products for oral, plastic, and craniomaxillofacial surgery. New product developments in its titanium osteosynthesis plating systems allow these products to be used for rapid sternal fixation and reconstruction.

### Koros USA, Inc Booth: 328 Moorpark, CA

Koros USA manufactures and distributes coronary artery bypass, aortic valve replacement, internal mammary artery, and mitral valve retractors, pediatric and adult sternum spreaders, rib spreaders, and titanium/stainless steel needle holders and forceps. High-demand state-of-the-art instruments include the Internal Mammary Artery Tower, SWIFT, and Pro-Retractors.

## Life Net Health Booth: 325 Pleasant Prairie, WI

### LivaNova Booth: 313 Arvada, CO

LivaNova is a world leader in the treatment of cardiovascular disease. Its innovative product portfolio includes aortic and mitral valve replacement and repair, perfusion equipment, cannula, and minimally invasive cardiac surgery instruments. For more information, visit www.livanova.com.

## LoupeCam Scottsdale, AZ

LoupeCam® is the market leader in head-mounted HD surgical cameras and is the ONLY company offering cross platform (Mac, Windows, and soon Android) compatibility. The company offers five different magnification lenses to match all surgical points of view, along with a Bluetooth foot pedal that allows for hands-free control of the camera.

Booth: 1217

Booth: 531

Booth: 824

### LSI Solutions Booths: 537, 637 Victor, NY

LSI Solutions' RAM® Device is an automated, dual curved needle annular suturing device that places a 3.5-mm wide horizontal mattress subannular suture in one squeeze. The SEW-EASY™ Device is an automated dual linear needle prosthetic suturing device that places sutures through the sewing cuff in one squeeze. With 11 years of proven clinical results, COR-KNOT® is suture fastening technology you can trust.

## Mallinckrodt Pharmaceuticals Hampton, NJ

Mallinckrodt is a global business that develops, manufactures, markets, and distributes specialty pharmaceutical products and therapies. Mallinckrodt provides products for hemostasis during surgery. Visit www.mallinckrodt.com.

## Med Alliance Solutions Sycamore, IL

ISO 13485-certified medical device distributor committed to providing high-quality specialty devices for cardiothoracic surgery worldwide. Exclusive US distributor of French instruments manufacturer Delacroix-Chevalier and operational partner of Michigan-based Surge Cardiovascular for open heart surgical products.

### Medistim Booth: 917 Plymouth, MN

Medistim is the standard of care in the operating room. With the unique combination of transit time flow measurement and high-frequency ultrasound imaging guidance to help reduce and minimize the risk of negative postoperative outcomes, Medistim's quality assessment technology offers surgeons quantifiable validation and guidance during cardiovascular, vascular, transplantation, and neurosurgery.

## MedPartners Locum Tenens Booth: 112 Coral Springs, FL

MedPartners Locum Tenens specializes in placing well-qualified physicians and advanced practice clinicians in locum, locum-to-perm, and direct hire staff and leadership positions while making this process as seamless as possible for client facilities. Its highly skilled recruiters assist in this process from pre-qualification to final placement.

## Medtronic Booth: 1313 Minneapolis, MN

As a global leader in medical technology, services, and solutions, Medtronic improves the lives and health of millions of people each year. The company uses its deep clinical, therapeutic, and economic expertise to address the complex challenges faced by health care systems today. Let's take health care Further, Together. Learn more at Medtronic.com.

Booth: 107

# MedXpert North America Edmond, OK

MedXpert North America, LLC is a producer of medical devices (implants and instruments) specialized for all kind of procedures in the thoracic part of the human body. The company produces StraTos for three different indications (deformity, reconstruction after tumor resection, and trauma) and StraCos for two indications (trauma and reconstruction).

# Microsurgery Instruments, Inc Booth: 329 Bellaire, TX

Microsurgery Instruments is one of the leading suppliers of surgical instruments and loupes. The company's instruments include titanium scissors, needle holders, and DeBakey forceps. Its Super-Cut scissors are the sharpest in the market, and its newly designed surgical loupes offer up to 130-mm field of view and up to 11x magnification.

# Nadia International Booth: 1109 Austin, TX

Educational/surgical bronze sculptures for the thoracic surgeon. Museum-quality limited editions are created by the world famous sculptor Ronadró. More than 7500 surgeons in 77 countries collect his fine works of art. Introducing MIRACLE OF LIFE II and IN GOD's Hand II at the 2018 meeting.

National Death Index Booth: 206 Hyattsville, MD

# NeoChord, Inc Booth: 219 St Louis Park, MN

NeoChord, Inc is a global medical technology company leading the advancement of minimally invasive, beating heart repair of degenerative mitral valve regurgitation. NeoChord received CE market clearance in December 2012 for the DS1000 system, successfully treating more than 750 patients to date. For more information, visit www.NeoChord.com.

Nova Innovations Booth: 225 Las Vegas, NV

# Olympus America Inc Booth: 1307 Center Valley, PA

Olympus Medical Systems Group develops solutions for health care professionals that help improve clinical outcomes, reduce overall costs, and enhance quality of life for their patients. By enabling less invasive procedures, innovative diagnostic and therapeutic endoscopy, and early stage lung cancer evaluation and treatments, Olympus is transforming the future of health care.

# Oxford University Press Booth: 216 New York, NY

Visit the Oxford University Press stand to browse prestigious surgery books at an exclusive conference discount, and collect your free sample copies of the journals of the European Association for Cardio-Thoracic Surgery: European Journal of Cardio-Thoracic Surgery and Interactive CardioVascular and Thoracic Surgery.

P & M Harmony Booth: 106 Las Vegas, NV

# **Peters Surgical** Plymouth, MA

Vitalitec Geister will be displaying all its products, highlighting the Peters CV Suture, Enclose II Anastomosis Assist Device, Cygnet Flexible Clamps, Intrack Atraumatic Temporary Clamps and Inserts, and Geister ValveGate and ValveGate PRO line.

Booth: 307

#### **Pinnacle Biologics** Booth: 1532 Chicago, IL

Pinnacle Biologics delivers photodynamic therapy (PDT) to patients through its line of products. By administering an FDA-approved biopharmaceutical drug that is selectively retained in tumors and activated by an FDA-approved laser light, PDT can eradicate tumor cells. The two primary uses for Pinnacle's drug include the treatment of esophageal cancer and of non-smallcell lung cancer.

#### Booth: 220 **Providence Health & Services** Seattle, WA

Providence Health & Services is affiliated with Swedish Health Services, Pacific Medical Centers, and Kadlec. Together, the organizations include more than 5000 employed providers, 35 medical centers, and more than 600 clinics in Alaska, California, Montana, Oregon, and Washington. Providence is currently recruiting providers in nearly all medical specialties throughout the West. providence.org/providerjobs

#### Qualiteam srl Booth: 208 Chiaverano, Italy

Qualiteam designs products to improve postoperative recovery. Its dualfunction sternum and breast supports are unlike any other. They comfortably protect the internal closure from the outside day and night and effectively assist the healing sternum to decrease sternal infections, pain, and pulmonary complications, which ultimately decreases health care costs.

#### Booth: 425 **Quest Medical Inc** Allen, TX

Quest Medical Inc is a medical device manufacturer and worldwide distributor specializing in protecting the heart during cardiac surgery with the Quest MPS 2® and Microplegia. Quest also offers a unique variety of aortic punches, safety valves, vascular loops, and an anesthesia line designed for optimum cardiovascular surgery.

#### **R&D Surgical USA Inc** Booth: 830 Austin, TX

R&D Surgical USA / Xenosys USA serve the cardiac, thoracic, and vascular community with innovative products, including a portable nextgeneration LED surgical headlight offering freedom and convenience at less than 1 oz weight, a full range of custom surgical loupes giving an unbeatable field of vision and depth of focus, all while being light and comfortable, and the Xenosys wireless HD surgical camera system.

# Booth: 1112 **Regional Data Managers: STS National Database**

The Regional Data Manager booth provides opportunities for surgeons to interact with data managers from around the country who are actively involved with STS Regional Database efforts and collaborative STS groups. Come learn about regional activities and initiatives!

Booth: 922

Booth: 1706

Booth: 1705

# **Rose Micro Solutions** West Seneca, NY

Rose Micro Solutions sells high-quality optical loupes and LED lights for less! Its loupes start at \$279. Rose is a family business consisting of four brothers, and the company is named after their mother Rose. Stop by Booth 922 to see the company's new line of TTL loupes—you'll love the optics. Visit Rose online at www.rosemicrosolutions.com or call 716-608-0009. The company is rated A+ with the BBB.

## Rultract/Pemco Inc Cleveland, OH

Rultract's surgical retractors provide gentle and uniform lift, allowing maximum exposure for IMA dissection, redo hearts, xiphoid entry, subxiphoid pericardial procedures, minimally invasive procedures (Thoratrak capable), parasternal procedures, pediatric/ASD, t-incisions, transabdominal GEA midcab, pectus, LVAD extraction, and TEMLA procedures.

# Scanlan International St Paul, MN

Highest-quality surgical products designed and manufactured by the Scanlan family since 1921. More than 3000 titanium and stainless steel surgical instruments, including SCANLAN® Super Cut™ and Premier™ Scissors, SCANLAN® Legacy Needle Holders and Forceps, Memory Dilators, VATS SCANLAN® Dennis Rib Cutter and Rocco Nodule Clamps, and SCANLAN® Single-Use Products.

#### Society of Thoracic Surgeons, The Booth: 807 Chicago, IL

STS represents more than 7400 surgeons, researchers, and allied health care professionals worldwide who are dedicated to ensuring the best possible outcomes for surgeries of the heart, lung, and esophagus, as well as other surgical procedures within the chest. At the booth, learn more about member benefits, advocacy efforts (including STS-PAC), opportunities to participate in the STS National Database and publicly report outcomes, and cuttingedge research being conducted via the STS Research Center. You also can donate to The Thoracic Surgery Foundation, the Society's charitable arm, and get advice from The Annals of Thoracic Surgery staff on submitting your manuscript. Stop by Booth 807 or visit www.sts.org to learn more.

#### Sontec Instruments Booth: 1607 Centennial, CO

Sontec offers headlights, loupes, and the most comprehensive selection of exceptional hand-held surgical instruments available to the discriminating surgeon. There is no substitute for quality, expertise, and individualized service. Sontec's vast array awaits your consideration at its booth.

#### St Luke's University Health Network Booth: 127 Bethlehem, PA

#### STS/CTSNet Career Fair Back of Aisles 100-200

Make sure to stop by the STS/CTSNet Career Fair, which will give you the chance to meet face-to-face with top employers. Recruiters will be available to talk with you about career opportunities. The Career Fair will be open during Exhibit Hall hours.

# Summit International Medical Technologies Franklin, MA

Summit International Medical Technologies is a specialty medical device company, devoted to offering high-quality, clinically innovative products.

**Booth: 1028** 

Booth: 1717

Booth: 212

Booth: 1433

Booth: F02

Booth: 324

## Sunoptic Technologies Jacksonville, FL

Sunoptic Technologies offers a premium line of TITAN branded surgical headlights, xenon light sources, HD video cameras, recording devices, LED products, and fiber optic cables, as well as a full array of accessories (including lamps), parts, and repair services, direct to the surgical marketplace. The company delivers outstanding market-oriented products, combining high quality with exclusive distribution worldwide.

#### SurgiTel/General Scientific Corp Ann Arbor, MI

SurgiTel is the manufacturer of premium loupes and headlights sold around the world from its headquarters in Ann Arbor, MI. Holding a variety of patents, SurgiTel is always on the forefront of vision and ergonomics.

## SynCardia Systems, Inc Tucson, AZ

The SynCardia temporary Total Artificial Heart (TAH-t) is the world's only FDA, Health Canada, and CE approved Total Artificial Heart. It is approved as a bridge to transplant for patients dying from end-stage biventricular failure. Visit Booth 1433 for updates on the 50cc TAH-t and destination therapy.

## Talis Clinical, LLC Streetsboro, OH

Talis Clinical develops technology that integrates electronic health record, medical device, and other system data to provide tools at the point of care and remotely on any mobile platform. Its Advanced Clinical Guidance Engine "intelligizes" the data to bring meaningful and actionable patient information customized to each caregiver's role, including live wave forms.

# TandemLife Pittsburgh, PA

CardiacAssist, Inc dba TandemLife exists to deliver Life Support Simplified, with one small pump enabling any type of extracorporeal circulatory support your patients may need. Its unique pump has enabled the company to develop its most innovative product lines to date: TandemLife, TandemLung, Protek Duo, and VoyagerVest.

# Terumo Booth: 1224

#### Ann Arbor, MI

Vascutek, a Terumo company, will display an extensive range of sealed woven and knitted polyester grafts for peripheral, abdominal, and cardiothoracic surgery. Terumo will display the VirtuoSaph® Plus Endoscopic Vessel Harvesting System, Beating Heart and Surgical Stabilization products, and Terumo® Perfusion Products.

# Thompson Surgical Traverse City, MI

Thompson Surgical is a leader in exposure and the original manufacturer of the table-mounted Thompson Retractor. Cardiovascular surgeons will benefit from the Thompson Bolling Retractor, which provides extremely low-profile, stable, and uncompromised exposure of the heart structures for valve procedures. "Set it and forget it." -Steven Bolling, MD

Booth: 1719

Booth: 807

# Thoracic Surgery Foundation, The Chicago, IL

TSF was established in 1988 as a 501(c)(3) not-for-profit charitable organization. As the charitable arm of The Society of Thoracic Surgeons, its mission is to foster the development of surgeon scientists in cardiothoracic surgery, increasing knowledge and innovation to benefit patient care.

# Thoramet Surgical Booth: 306 Madison, CT

Thoramet Surgical Products sells the most complete line of video-assisted thoracoscopic surgical instruments available. Produced in the US in the company's own facilities, they are the surgeon's choice. Come to Booth 306 to see their unique versatility. Thoramet has the feel you want, the actuation you need, and the patterns you demand.

#### Transonic Booth: 331 Ithaca. NY

Transonic is the original inventor and innovator of transit-time flow measurement devices for coronary artery bypass grafting surgery, CHD repair, cardiopulmonary bypass, and extracorporeal membrane oxygenation cases. For more than 33 years, Transonic flow measurement systems have been used to advance physiologic understanding, as well as to provide surgeons with peace of mind that their anastomoses are patent prior to closure.

# Veran Medical Technologies Booth: 431 St Louis, MO

Veran is a privately held medical device company headquartered in St Louis, MO. The company's main focus is assisting physicians in the early diagnosis and treatment of lung cancer. Veran has developed and commercialized an FDA-cleared, next-generation electromagnetic navigation platform called the SPiN Thoracic Navigation System, which includes both endobronchial and transthoracic approaches.

# Vitalcor, Inc/Applied Fiberoptics Booth: 525 Westmont, IL

Vitalcor, Inc is a supplier of medical devices used primarily in cardiothoracic surgery. Since 1975, Vitalcor has provided products that take input from teaching and practicing surgeons to make their practice easier. The company takes pride in offering quality products and providing exceptional customer service.

# Weatherby Healthcare Booth: 113 Fort Lauderdale, FL

Since 1995, Weatherby Healthcare has established itself as an expert in locum tenens staffing for physicians, physician assistants, and nurse practitioners. The company employs nearly 600 employees committed to filling locum tenens assignments in large-scale health care networks, hospitals, and clinics nationwide. For more, visit weatherbyhealthcare.com.

#### Vidant Medical Center Booth: 1613

Robust, nationally recognized cardiovascular care flourishes at Vidant Medical Center, built on the strength of world-renowned specialists serving the eastern one-third of North Carolina. Working in tandem with The Brody School of Medicine at East Carolina University, Vidant brings together cardiac, thoracic, and vascular surgeons, cardiologists, clinical trials, as well as diabetes and obesity research. At its vast campus in Greenville, North Carolina, it offers an environment where academic, employed, and private practice physicians work cohesively to meet the heart and vascular needs of this medically underserved region. vidanthealth.com

## **EXHIBITOR LISTING**

# WellStar Health System Marietta, GA

# Western Thoracic Surgical Association Booth: 936 Beverly, MA

Booth: 125

Booth: 506

WTSA's annual meeting combines first-rate scientific papers with family-oriented activities. Please join WTSA June 27-30, 2018, at the Ritz Carlton Bacara in Goleta, CA. www.westernthoracic.org

# Wexler Surgical, Inc Booth: 1200 Houston, TX

Wexler Surgical designs and manufactures a variety of titanium and stainless steel specialty surgical instruments and products for cardiac, vascular, thoracic, and micro surgery. Come see its VATS/MICS instruments and ask about the Optimus Series. Visit www.wexlersurgical.com for more information about products and services, or e-mail sales@wexlersurgical.com.

# World Society for Pediatric and Congenital Heart Surgery Booth: 732 Montreal, Canada

The mission of the World Society for Pediatric and Congenital Heart Surgery is to promote the highest quality comprehensive cardiac care to all patients with congenital heart disease, from the fetus to the adult, regardless of the patient's economic means, with an emphasis on excellence in teaching, research, and community service.

Wolters Kluwer Booth: 308 Phoenix, AZ

# Zimmer Biomet Thoracic Jacksonville, FL

Founded in 1927, Zimmer Biomet is a global leader in musculoskeletal health care. The company designs, manufactures, and markets a comprehensive portfolio of innovative thoracic products and treatment solutions for surgeons and patients, including the RibFix™ Blu Thoracic Fixation System and the SternaLock® Blu Primary Closure System.

# **EXHIBITOR ADVISORY COMMITTEE (EAC)**

The purpose of the EAC is to provide STS with input and feedback as further develops exhibit-focused procedures and services, delves into industry issues, and tries to better understand the challenges faced by today's industry professionals. The current EAC members are:

Barry W. Annis, Getinge Group

Trish Doede, AtriCure

Jeffrey Pellicio, LivaNova

Rob Skuras, Terumo Cardiovascular

Diane G. Wicks, Nadia International, Inc.

Alexis Willis, Johnson & Johnson Medical Devices Companies

#### **PRESIDENT**

Richard L. Prager | Ann Arbor, MI

#### FIRST VICE PRESIDENT

Keith S. Naunheim | St Louis, MO

#### SECOND VICE PRESIDENT

Robert S. D. Higgins | Baltimore, MD

#### **SECRETARY**

Joseph F. Sabik III | Cleveland, OH

#### **TREASURER**

Thomas E. MacGillivray | Houston, TX

#### **IMMEDIATE PAST PRESIDENT**

Joseph E. Bavaria | Philadelphia, PA

#### RESIDENT DIRECTOR

Edo K. S. Bedzra | Seattle, WA

#### INTERNATIONAL DIRECTORS

Haiquan Chen | Shanghai, China

Domenico Pagano | Birmingham, United Kingdom

#### **CANADIAN DIRECTOR**

Sean C. Grondin | Calgary, Canada

## **PUBLIC DIRECTOR**

Christopher M. Draft | Atlanta, GA

# **DIRECTORS-AT-LARGE**

Shanda H. Blackmon | Rochester, MN

Joseph C. Cleveland Jr | Aurora, CO

Joseph A. Dearani | Rochester, MN

Bryan F. Meyers | St Louis, MO

Vinod H. Thourani | Washington, DC

Cameron D. Wright | Boston, MA

# **EDITOR**

G. Alexander Patterson | St Louis, MO

#### **HISTORIAN**

Douglas J. Mathisen | Boston, MA

#### **EXECUTIVE COMMITTEE**

Richard L. Prager, Chair | Ann Arbor, MI

Joseph E. Bavaria | Philadelphia, PA

Robert S. D. Higgins | Baltimore, MD

Thomas E. MacGillivray | Houston, TX

Keith S. Naunheim | St Louis, MO

Joseph F. Sabik III | Cleveland, OH

#### **FINANCE COMMITTEE**

Mark S. Allen, Chair | Rochester, MN

David A. Fullerton | Aurora, CO

Thomas E. MacGillivray, Ex-Officio | Houston, TX

Douglas J. Mathisen | Boston, MA

Keith S. Naunheim, Ex-Officio | St Louis, MO

Joseph F. Sabik III, Ex-Officio | Cleveland, OH

#### **MEMBERSHIP COMMITTEE**

Gail E. Darling, Chair | Toronto, Canada

Leah M. Backhus | Stanford, CA

Robert J. Dabal | Birmingham, AL

Eric J. Devaney | Cleveland, OH

Daniel L. Fortes | Austin, TX

Shelley C. Lall | Traverse City, MI

Daniel L. Miller | Marietta, GA

Edward B. Savage | Weston, FL

Michael J. Weyant | Aurora, CO

#### **NOMINATING COMMITTEE**

Jeffrey B. Rich, Chair | Cleveland, OH

Douglas E. Wood | Seattle, WA

David A. Fullerton | Aurora, CO

Mark S. Allen | Rochester, MN

Joseph E. Bavaria | Philadelphia, PA

Richard L. Prager, Ex-Officio, Non-Voting | Ann Arbor, MI

#### STANDARDS AND ETHICS COMMITTEE

Richard I. Whyte, Chair | Boston, MA

Joseph E. Bavaria, Ex-Officio | Philadelphia, PA

David Blitzer | Cambridge, MA

Andrea J. Carpenter | San Antonio, TX

Daniel H. Drake | Traverse City, MI

Jennifer L. Ellis | Washington, DC

John W. C. Entwistle III | Philadelphia, PA

Richard K. Freeman | Indianapolis, IN

James Jaggers | Aurora, CO

John E. Mayer Jr | Boston, MA

J. Scott Millikan | Billings, MT

John D. Mitchell | Aurora, CO

R. Scott Mitchell | Stanford, CA

Sudish C. Murthy | Cleveland, OH

Allan Pickens | Atlanta, GA

Sandra L. Starnes | Cincinnati, OH

Douglas E. Wood | Seattle, WA

#### **COUNCIL ON MEETINGS AND EDUCATION**

#### **OPERATING BOARD**

Wilson Y. Szeto | Council Chair

Himanshu J. Patel | Chair, Workforce on Annual Meeting

Thomas K. Varghese Jr | Chair, Workforce on Clinical Education

Ara A. Vaporciyan | Chair, Workforce on E-Learning and Educational Innovation

Vinod H. Thourani | Chair, Workforce on International Meetings

Gorav Ailawadi | Chair, Workforce on New Technology

Craig J. Baker | Chair, Workforce on Thoracic Surgery Resident Issues

Fenton H. McCarthy | Resident Appointee

Richard L. Prager | Ex-Officio

Cameron D. Wright | Ex-Officio

# **WORKFORCE ON ANNUAL MEETING**

Himanshu J. Patel, Chair | Ann Arbor, MI

David T. Cooke | Sacramento, CA

T. Sloane Guy | New York, NY

James D. Luketich | Pittsburgh, PA

James S. Tweddell | Cincinnati, OH

# **WORKFORCE ON ANNUAL MEETING (PROGRAM TASK FORCE)**

Himanshu J. Patel, Chair | Ann Arbor, MI

Jehangir J. Appoo | Calgary, Canada

Carl L. Backer | Chicago, IL

Edward P. Chen | Atlanta, GA

David T. Cooke | Sacramento, CA

Farhood Farjah | Seattle, WA

Thomas G. Gleason | Pittsburgh, PA

Richard Lee | St Louis, MO

Christopher R. Morse | Boston, MA

Christian Pizarro | Wilmington, DE

T. Brett Reece | Aurora, CO

Brett C. Sheridan | San Francisco, CA

Ibrahim Sultan | Pittsburgh, PA

James S. Tweddell | Cincinnati, OH

#### **WORKFORCE ON ANNUAL MEETING (STS UNIVERSITY TASK FORCE)**

David T. Cooke, Chair | Sacramento, CA

Edward Y. H. Chan | Houston, TX

Andy C. Kiser | Greenville, NC

Nahush A. Mokadam | Seattle, WA

Matthew A. Romano | Ann Arbor, MI

Betty C. Tong | Durham, NC

Kazuhiro Yasufuku | Toronto, Canada

# **WORKFORCE ON ANNUAL MEETING (TECH-CON TASK FORCE)\***

T. Sloane Guy, Co-Chair | New York, NY

James D. Luketich, Co-Chair | Pittsburgh, PA

Lisa M. Brown | Sacramento, CA

Nimesh Desai | Philadelphia, PA

Melanie A. Edwards | St Louis, MO

Ali Khoynezhad\*\* | Los Angeles, CA

Tom C. Nguyen | Houston, TX

Michael F. Reed | Hershey, PA

John M. Stulak | Rochester, MN

Gilbert H. L. Tang | New York, NY

Mathew R. Williams | New York, NY

<sup>\*</sup>Joint STS/AATS activity \*\*AATS representative

#### **WORKFORCE ON CLINICAL EDUCATION**

Thomas K. Varghese Jr, Chair | Salt Lake City, UT

Usman Ahmad | Cleveland, OH

Edward M. Bender | Corvallis, OR

David T. Cooke | Sacramento, CA

Ahmet Kilic | Baltimore, MD

Virginia R. Litle | Boston, MA

Jennifer C. Romano | Ann Arbor, MI

Sara J. Shumway | Minneapolis, MN

Jennifer D. Walker | Worcester, MA

# **WORKFORCE ON E-LEARNING AND EDUCATIONAL INNOVATION**

Ara A. Vaporciyan, Chair | Houston, TX

Mara B. Antonoff | Houston, TX

Craig J. Baker | Los Angeles, CA

James I. Fann | Stanford, CA

Karen M. Kim | Ann Arbor, MI

Jules Lin | Ann Arbor, MI

Douglas J. Mathisen | Boston, MA

D. Michael McMullan | Seattle, WA

Bryan F. Meyers | St Louis, MO

Rita C. Milewski | Philadelphia, PA

Nahush A. Mokadam | Seattle, WA

Keith S. Naunheim | St Louis, MO

Colin Schieman | Calgary, Canada

Asad A. Shah | Durham, NC

Richard J. Shemin | Los Angeles, CA

Sandra L. Starnes | Cincinnati, OH

Curt Tribble | Charlottesville, VA

Edward D. Verrier | Seattle, WA

Stephen C. Yang | Baltimore, MD

#### **WORKFORCE ON INTERNATIONAL MEETINGS**

Vinod H. Thourani, Chair | Washington, DC

Gabriel S. Aldea | Seattle, WA

Jorge M. Balaguer | Chicago, IL

Joseph E. Bavaria | Philadelphia, PA

Christian A. Bermudez | Philadelphia, PA

Graciano Castillo-Ortega | Sonora, Mexico

Juan A. Crestanello | Columbus, OH

Jose Ribas M. De Campos | São Paulo, Brazil

Sebastian A. Defranchi | Buenos Aires, Argentina

Enrico R. Ferrari | Lugano, Switzerland

Changqing Gao | Beijing, China

Arnar Geirsson | New Haven, CT

Rune Haaverstad | Bergen, Norway

Jeremiah A. Hayanga | Morgantown, WV

Chuen Neng Lee | Singapore, Singapore

Richard Lee | St Louis, MO

S. Chris Malaisrie | Chicago, IL

Benjamin Medalion | Cleveland, OH

Patrick O. Myers | Geneva, Switzerland

Hani K. Najm | Cleveland, OH

Davide Pacini | Bologna, Italy

Soon J. Park | Cleveland, OH

Christian Pizarro | Wilmington, DE

Darshan Reddy | Durban, South Africa

Gaetano Rocco | Naples, Italy

Hon Chi Suen | St Louis, MO

Leonidas Tapias | Boston, MA

Michael Z. Tong | Cleveland, OH

Yuichi Ueda | Nara, Japan

Juan P. Umaña | Bogotá, Colombia

Thomas K. Varghese Jr | Salt Lake City, UT

Song Wan | Hong Kong, China

Douglas E. Wood | Seattle, WA

#### **WORKFORCE ON NEW TECHNOLOGY\***

Gorav Ailawadi, Chair | Charlottesville, VA

Joshua N. Baker | St Louis, MO

Jay K. Bhama\*\* | Iowa City, LA

Thierry P. Carrel | Bern, Switzerland

Reza R. Dabir | Dearborn, MI

 ${\it Todd L. Demmy} \mid {\it Buffalo, NY}$ 

J. Michael DiMaio | Dallas, TX

Christian D. Etz | Leipzig, Germany

Enrico R. Ferrari | Lugano, Switzerland

Charles D. Fraser Jr\*\* | Houston, TX

Kamal R. Khabbaz | Boston, MA

Robert L. Kormos | Pittsburgh, PA

D. Michael McMullan | Seattle, WA

Stephanie L. Mick | Cleveland, OH

Mubashir A. Mumtaz | Harrisburg, PA

Davide Pacini | Bologna, Italy

Jonathan M. Philpott | Norfolk, VA

T. Brett Reece | Aurora, CO

David C. Rice | Houston, TX

Eric E. Roselli\*\* | Cleveland, OH

Sunil Singhal | Philadelphia, PA

Wilson Y. Szeto | Philadelphia, PA

Vinod H. Thourani | Washington, DC

Joseph B. Zwischenberger | Lexington, KY

\*Joint STS/AATS activity \*\*AATS representative

#### **WORKFORCE ON THORACIC SURGERY RESIDENT ISSUES**

Craig J. Baker, Chair | Los Angeles, CA

Edo K. S. Bedzra | Seattle, WA

Elisabeth U. Dexter | Buffalo, NY

Sidharta P. Gangadharan | Boston, MA

James Huang | New York, NY

Mark D. Iannettoni | Greenville, NC

Michael E. Jessen | Dallas, TX

Jules Lin | Ann Arbor, MI

Ryan A. Macke | Phoenix, AZ

Christopher E. Mascio | Philadelphia, PA

Shari L. Meyerson | Chicago, IL

Maral Ouzounian | Toronto, Canada

Rishindra M. Reddy | Ann Arbor, MI

Janani S. Reisenauer | Rochester, MN

Ross M. Reul | Houston, TX

Danielle Smith | Portland, OR

Leora T. Yarboro | Charlottesville, VA

#### **COUNCIL ON QUALITY, RESEARCH, AND PATIENT SAFETY**

#### **OPERATING BOARD**

David M. Shahian | Council Chair

Faisal G. Bakaeen | Chair, Workforce on Evidence Based Surgery

Jeffrey P. Jacobs | Chair, Workforce on National Databases

James I. Fann | Chair, Workforce on Patient Safety

Felix G. Fernandez | Chair, Workforce on Research Development

Michael J. Mack | Appointed Member

Domenico Pagano | Appointed Member

Joe B. Putnam Jr | Appointed Member

Richard J. Shemin | Appointed Member

Elizabeth H. Stephens | Resident Appointee

Shanda H. Blackmon | Ex-Officio

Robert S. D. Higgins | Ex-Officio

#### **WORKFORCE ON EVIDENCE BASED SURGERY**

Faisal G. Bakaeen, Chair | Cleveland, OH

Anders Ahlsson | Stockholm, Sweden

Vinay Badhwar | Morgantown, WV

Mark F. Berry | Stanford, CA

Justin D. Blasberg | New Haven, CT

Joel Dunning | Middlesbrough, United Kingdom

Melanie A. Edwards | St Louis, MO

Farhood Farjah | Seattle, WA

Mark K. Ferguson | Chicago, IL

Felix G. Fernandez | Atlanta, GA

Michael P. Fischbein | Stanford, CA

Michael E. Jessen | Dallas, TX

Michael Lanuti | Boston, MA

Jennifer S. Lawton | Baltimore, MD

Donald E. Low | Seattle, WA

R. Scott McClure | Calgary, Canada

Dan M. Meyer | Dallas, TX

Bernard J. Park | New York, NY

Daniel P. Raymond | Cleveland, OH

Todd K. Rosengart | Houston, TX

Craig H. Selzman | Salt Lake City, UT

Matthew L. Williams | Philadelphia, PA

#### **WORKFORCE ON NATIONAL DATABASES**

Jeffrey P. Jacobs, Chair | St Petersburg, FL

James H. Abernathy | Baltimore, MD

Andrew C. Chang | Ann Arbor, MI

Richard S. D'Agostino | Burlington, MA

Nimesh Desai | Philadelphia, PA

Melanie A. Edwards | St Louis, MO

Farhood Farjah | Seattle, WA

Christopher M. Feindel | Toronto, Canada

Felix G. Fernandez | Atlanta, GA

Marshall L. Jacobs | Newtown Square, PA

Mark R. Katlic | Baltimore, MD

Benjamin D. Kozower | St Louis, MO

Dorothy J. Latham | Marysville, MI

Ryan F. Lauer | Loma Linda, CA

Noboru Motomura | Sakura-City, Japan

Mark W. Onaitis | La Jolla, CA

Francis D. Pagani | Ann Arbor, MI

Domenico Pagano | Birmingham, United Kingdom

Daniel P. Raymond | Cleveland, OH

Joseph B. Shrager | Stanford, CA

Alan M. Speir | Falls Church, VA

Rakesh M. Suri | Cleveland, OH

James E. Tcheng | Durham, NC

#### **WORKFORCE ON PATIENT SAFETY**

James I. Fann, Chair | Stanford, CA

Giorgio M. Aru | Jackson, MS

Stephen C. Clark | Newcastle upon Tyne, United Kingdom

W. Chance Conner | Austin, TX

Robert J. Cusimano | Toronto, Canada

Timothy A. Dickinson† | Rochester, MN

J. Michael DiMaio | Dallas, TX

Francis D. Ferdinand | Albany, NY

Steven D. Harrington | Clinton Township, MI

Michal Hubka | Seattle, WA

Michael S. Kent | Boston, MA

Kevin W. Lobdell | Charlotte, NC

Robert A. Meguid | Aurora, CO

Susan D. Moffatt-Bruce | Columbus, OH

Theolyn N. Price | Colorado Springs, CO

Kenneth Shann | Boston, MA

Garrett L. Walsh | Houston, TX

#### †AmSECT representative

#### WORKFORCE ON RESEARCH DEVELOPMENT

Felix G. Fernandez, Chair | Atlanta, GA

Shahab A. Akhter | Greenville, NC

Vinay Badhwar | Morgantown, WV

Michael P. Fischbein | Stanford, CA

Henning A. Gaissert | Boston, MA

Tara B. Karamlou | Phoenix, AZ

Rosemary F. Kelly | Minneapolis, MN

Donald S. Likosky | Ann Arbor, MI

Mitchell J. Magee | Dallas, TX

Joseph D. Phillips | Hanover, NH

John D. Puskas | New York, NY

Joe B. Putnam Jr | Jacksonville, FL

Frank W. Sellke | Providence, RI

Sunil Singhal | Philadelphia, PA

Prashanth Vallabhajosyula | Philadelphia, PA

Bo Yang | Ann Arbor, MI

Joseph B. Zwischenberger | Lexington, KY

#### **COUNCIL ON HEALTH POLICY AND RELATIONSHIPS**

#### **OPERATING BOARD**

Alan M. Speir | Council Chair

Francis C. Nichols III | Chair, Workforce on Coding and Reimbursement

Stephen J. Lahey | Chair, Workforce on Health Policy, Reform, and Advocacy

Robbin G. Cohen | Chair, Workforce on Media Relations and Communications

John V. Conte | Appointed Member

John E. Mayer Jr | Appointed Member

Jeffrey B. Rich | Appointed Member

Amanda L. Eilers | Resident Appointee

Joseph A. Dearani | Ex-Officio

Bryan F. Meyers | Ex-Officio

Keith S. Naunheim | Ex-Officio

# **WORKFORCE ON CODING AND REIMBURSEMENT**

Francis C. Nichols III, Chair | Rochester, MN

Stephen J. Lahey, Vice Chair | Farmington, CT

Aaron M. Cheng | Seattle, WA

Joseph C. Cleveland Jr | Aurora, CO

Verdi J. DiSesa | Philadelphia, PA

Richard K. Freeman | Indianapolis, IN

Kevin L. Greason | Rochester, MN

Michael E. Halkos | Atlanta, GA

John A. Howington | Nashville, TN

Jeffrey P. Jacobs | St Petersburg, FL

G. Gilbert Johnston | Arlington, VA

Kirk R. Kanter | Atlanta, GA

Vigneshwar Kasirajan | Richmond, VA

James M. Levett | Cedar Rapids, IA

Vassyl A. Lonchyna | Chicago, IL

Daniel P. McCarthy | Madison, WI

Anastasios C. Polimenakos | Augusta, GA

Clifton C. Reade | Chattanooga, TN

V. Seenu Reddy | Nashville, TN

Sanjay A. Samy | Albany, NY

James R. Scharff | St Louis, MO

Scott C. Silvestry | Orlando, FL

James D. St Louis | Kansas City, MO

Prashanth Vallabhajosyula | Philadelphia, PA

Winfield J. Wells | Los Angeles, CA

#### **WORKFORCE ON HEALTH POLICY, REFORM, AND ADVOCACY\***

Stephen J. Lahey, Chair | Farmington, CT

Kevin D. Accola | Orlando, FL

Robert S. Boova | Philadelphia, PA

John H. Calhoon | San Antonio, TX

Jeremy Conklin | Dallas, TX

J. Michael DiMaio\*\* | Dallas, TX

Aaron W. Eckhauser | Salt Lake City, UT

Daniel T. Engelman | Springfield, MA

Frederick L. Grover | Aurora, CO

Keith A. Horvath | Washington, DC

Richard Lee | St Louis, MO

Bradley G. Leshnower | Atlanta, GA

Mitchell J. Magee | Dallas, TX

J. Scott Millikan | Billings, MT

Gita N. Mody | Boston, MA

Susan D. Moffatt-Bruce\*\* | Columbus, OH

Alykhan S. Nagji | Kansas City, KS

Ourania A. Preventza | Houston, TX

Paul D. Robison | Cape Girardeau, MO

Todd K. Rosengart\*\* | Houston, TX

Eric L. Sarin | Falls Church, VA

Raymond L. Singer | Allentown, PA

Raymond J. Strobel | Ann Arbor, MI

Jess L. Thompson III | Oklahoma City, OK

Bruce Toporoff | Altoona, PA

Richard I. Whyte | Boston, MA

Douglas E. Wood | Seattle, WA

\*Joint STS/AATS activity \*\*AATS representative

#### **WORKFORCE ON MEDIA RELATIONS AND COMMUNICATIONS**

Robbin G. Cohen, Chair | Los Angeles, CA

Mara B. Antonoff | Houston, TX

Leah M. Backhus | Stanford, CA

John V. Conte | Hershey, PA

Richard H. Feins | Chapel Hill, NC

Frederick L. Grover | Aurora, CO

Steven W. Guyton | Shoreline, WA

Linda W. Martin | Charlottesville, VA

Jeffrey B. Rich | Cleveland, OH

Todd K. Rosengart | Houston, TX

Mark J. Russo | Newark, NJ

K. Robert Shen | Rochester, MN

Brendon M. Stiles | New York, NY

#### **COUNCIL ON CLINICAL PRACTICE AND MEMBER ENGAGEMENT**

#### **OPERATING BOARD**

Francis D. Pagani | Council Chair

John S. Ikonomidis | Chair, Workforce on Adult Cardiac and Vascular Surgery

Walter H. Merrill | Chair, Workforce on Associate Membership

Vinay Badhwar | Chair, Workforce on Career Development

James S. Tweddell | Chair, Workforce on Congenital Heart Surgery

Glenn J. R. Whitman | Chair, Workforce on Critical Care

Michael J. Weyant | Chair, Workforce on General Thoracic Surgery

Frank L. Fazzalari | Chair, Workforce on Practice Management

Jennifer S. Nelson | Chair, Workforce on Surgical Treatment of Adults with Congenital Heart Disease

Jonathan W. Haft | Chair, Workforce on Surgical Treatment of End-Stage Cardiopulmonary Disease

James R. Edgerton | Appointed Member

Panos Vardas | Resident Appointee

Joseph C. Cleveland Jr | Ex-Officio

Joseph F. Sabik III | Ex-Officio

#### **WORKFORCE ON ADULT CARDIAC AND VASCULAR SURGERY**

John S. Ikonomidis, Chair | Chapel Hill, NC

Niv Ad | Morgantown, WV

Gorav Ailawadi | Charlottesville, VA

Pavan Atluri | Philadelphia, PA

Edward P. Chen | Atlanta, GA

James E. Davies Jr | Birmingham, AL

T. Sloane Guy | New York, NY

Robert C. Hagberg | Hartford, CT

G. Chad Hughes IV | Durham, NC

Robert L. Kormos | Pittsburgh, PA

John C. Laschinger | Silver Spring, MD

Jennifer S. Lawton | Baltimore, MD

John D. Puskas | New York, NY

T. Brett Reece | Aurora, CO

Elaine E. Tseng | San Francisco, CA

Grayson H. Wheatley III | Nashville, TN

#### **WORKFORCE ON ASSOCIATE MEMBERSHIP**

Walter H. Merrill, Chair | Nashville, TN

Ayesha S. Bryant | Birmingham, AL

Aaron M. Cheng | Seattle, WA

Katherine F. Cornelius | Birmingham, AL

Kathryn Gray DeAngelis | Philadelphia, PA

Milo Engoren | Ann Arbor, MI

David C. Fitzgerald | Mount Pleasant, VA

Erin A. Gillaspie | Nashville, TN

Clayton A. Kaiser | Nashville, TN

Cathy E. Knoff | Dallas, TX

Allison Leonard | Dallas, TX

S. Jill Ley | San Francisco, CA

Nicole M. Michaud | Franklin, TN

Edward A. Ranzenbach | Sacramento, CA

Stefano Schena | St Louis, MO

Harmik J. Soukiasian | Los Angeles, CA

Brandon H. Tieu | Portland, OR

#### **WORKFORCE ON CAREER DEVELOPMENT**

Vinay Badhwar, Chair | Morgantown, WV

Mara B. Antonoff | Houston, TX

Shanda H. Blackmon | Rochester, MN

Christopher A. Caldarone | Toronto, Canada

Jonathan D'Cunha | Pittsburgh, PA

Nimesh Desai | Philadelphia, PA

Melanie A. Edwards | St Louis, MO

Frank L. Fazzalari | Ann Arbor, MI

Robert S. D. Higgins | Baltimore, MD

Jeffrey P. Jacobs | St Petersburg, FL

Damien J. LaPar | New York, NY

Bradley G. Leshnower | Atlanta, GA

Gabriel Loor | Houston, TX

Muhammad F. Masood | St Louis, MO

David D. Odell | Chicago, IL

V. Seenu Reddy | Nashville, TN

Eric L. Sarin | Falls Church, VA

Vinod H. Thourani | Washington, DC

#### **WORKFORCE ON CONGENITAL HEART SURGERY**

James S. Tweddell, Chair | Cincinnati, OH

Joseph A. Dearani | Rochester, MN

Stephanie M. Fuller | Philadelphia, PA

Kristine J. Guleserian | Miami, FL

S. Adil Husain | San Antonio, TX

Minoo N. Kavarana | Charleston, SC

Aditya K. Kaza | Boston, MA

Deborah J. Kozik | Louisville, KY

D. Michael McMullan | Seattle, WA

Bret A. Mettler | Nashville, TN

James D. St Louis | Kansas City, MO

Joseph W. Turek | Durham, NC

Glen S. Van Arsdell | Toronto, Canada

#### **WORKFORCE ON CRITICAL CARE**

Glenn J. R. Whitman, Chair | Baltimore, MD

Rakesh C. Arora | Winnipeg, Canada

Subhasis Chatterjee | Houston, TX

Daniel T. Engelman | Springfield, MA

Michael S. Firstenberg | Akron, OH

Charles M. Geller | Wynnewood, PA

Hitoshi Hirose | Philadelphia, PA

James M. Isbell | New York, NY

Colleen G. Koch | Baltimore, MD

Vassyl A. Lonchyna | Chicago, IL

Francis T. Lytle | Cleveland, OH

Rita C. Milewski | Philadelphia, PA

Rainer G. H. Moosdorf | Marburg, Germany

Michael S. Mulligan | Seattle, WA

Joseph Rabin | Baltimore, MD

Jay G. Shake | Jackson, MS

Michael H. Wall | Minneapolis, MN

Thomas B. Washburn Jr | Huntsville, AL

#### **WORKFORCE ON GENERAL THORACIC SURGERY**

Michael J. Weyant, Chair | Aurora, CO

Robert J. Cerfolio | New York, NY

Thomas A. D'Amico | Durham, NC

Jessica S. Donington | New York, NY

Janet P. Edwards | Calgary, Canada

Philip A. Linden | Cleveland, OH

Jason M. Long | Chapel Hill, NC

M. Blair Marshall | Washington, DC

Linda W. Martin | Charlottesville, VA

Michael S. Mulligan | Seattle, WA

Bernard J. Park | New York, NY

David C. Rice | Houston, TX

Dirk E. M. Van Raemdonck | Leuven, Belgium

Thomas K. Waddell | Toronto, Canada

Richard I. Whyte | Boston, MA

#### WORKFORCE ON PRACTICE MANAGEMENT

Frank L. Fazzalari, Chair | Ann Arbor, MI

Faiz Bhora | New York, NY

Matthew G. Blum | Colorado Springs, CO

Philip F. Bongiorno | Columbus, OH

Alfred S. Casale | Wilkes-Barre, PA

Jeffrey T. Cope | Lancaster, PA

Paul S. Levy | Jonesboro, AR

Edward T. Murphy | Grand Rapids, MI

Joseph R. Newton Jr | Norfolk, VA

Harold G. Roberts | Morgantown, WV

Raymond L. Singer | Allentown, PA

Heather Smith | Philadelphia, PA

# WORKFORCE ON SURGICAL TREATMENT OF ADULTS WITH CONGENITAL HEART DISEASE

Jennifer S. Nelson, Chair | Orlando, FL

Sertac Cicek | Rochester, MN

Joseph A. Dearani | Rochester, MN

Eric N. Feins | Boston, MA

Stephanie M. Fuller | Philadelphia, PA

Joshua L. Hermsen | Verona, WI

Charles B. Huddleston | St Louis, MO

Robert D. B. Jaquiss | Dallas, TX

Prakash A. Patel | Philadelphia, PA

Frank G. Scholl | Hollywood, FL

James S. Tweddell | Cincinnati, OH

# WORKFORCE ON SURGICAL TREATMENT OF END-STAGE CARDIOPULMONARY DISEASE

Jonathan W. Haft, Chair | Ann Arbor, MI

Michael A. Acker | Philadelphia, PA

Francisco A. Arabia | Los Angeles, CA

Pavan Atluri | Philadelphia, PA

Ashok N. Babu | Nashville, TN

Christian A. Bermudez | Philadelphia, PA

Todd M. Dewey | Dallas, TX

William Hiesinger | Stanford, CA

Marzia Leacche | Grand Rapids, MI

Michael F. McGrath | Portland, ME

Bryan F. Meyers | St Louis, MO

Carmelo A. Milano | Durham, NC

Yoshifumi Naka | New York, NY

Jay D. Pal | Aurora, CO

Vivek Rao | Toronto, Canada

Christopher T. Salerno | Indianapolis, IN

John M. Stulak | Rochester, MN

Bryan A. Whitson | Columbus, OH

Giorgio Zanotti | Indianapolis, IN

# STS-PAC BOARD OF ADVISORS

# STS-PAC BOARD OF ADVISORS

Alan M. Speir, Chair | Falls Church, VA

Joseph E. Bavaria, Ex-Officio | Philadelphia, PA

Stephen J. Lahey, Ex-Officio | Farmington, CT

Richard Lee | St Louis, MO

Thomas E. MacGillivray, Ex-Officio | Houston, TX

Keith S. Naunheim, Ex-Officio | St Louis, MO

Raymond L. Singer | Allentown, PA

Jess L. Thompson III | Oklahoma City, OK

Robert A. Wynbrandt, Ex-Officio | Chicago, IL

Courtney Yohe, Ex-Officio | Washington, DC

# THE ANNALS OF THORACIC SURGERY

# THE ANNALS OF THORACIC SURGERY EDITORIAL BOARD

#### **EDITOR**

G. Alexander Patterson | St Louis, MO

### **DEPUTY EDITORS**

Adult Cardiac

James S. Gammie | Baltimore, MD

John A. Kern | Charlottesville, VA

Jennifer S. Lawton | Baltimore, MD

Congenital Heart

Scott M. Bradley | Charleston, SC

Jennifer C. Romano | Ann Arbor, MI

General Thoracic

Mark K. Ferguson | Chicago, IL

James D. Luketich | Pittsburgh, PA

Biostatistics

Graham Colditz | St Louis, MO

CME

Colleen G. Koch | Baltimore, MD

Education

Wilson Y. Szeto | Philadelphia, PA

Interactive Learning

Shanda H. Blackmon | Rochester, MN

Public Policy

Alan M. Speir | Falls Church, VA

Quality

David M. Shahian | Boston, MA

#### **ASSOCIATE EDITORS**

CME

Rick A. Esposito | Manhasset, NY

Kirk R. Kanter | Atlanta, GA

Kemp H. Kernstine | Dallas, TX

Feroze Mahmood | Boston, MA

Nicholas G. Smedira | Cleveland, OH

Ethics

Robert M. Sade | Charleston, SC

#### THE ANNALS OF THORACIC SURGERY

Surgical Heritage

Douglas J. Mathisen | Boston, MA

Feature Articles

Gorav Ailawadi | Charlottesville, VA

Daniel J. Boffa | New Haven, CT

Derek R. Brinster | New York, NY

Joanna Chikwe | New York, NY

Robert D. B. Jaquiss | Dallas, TX

Mitchell J. Magee | Dallas, TX

M. Blair Marshall | Washington, DC

Jorge D. Salazar | Jackson, MS

Mark S. Slaughter | Louisville, KY

Thomas J. Vander Salm | Salem, MA

#### **EDITORIAL BOARD MEMBERS**

Mark S. Allen | Rochester, MN

Nasser K. Altorki | New York, NY

Mara B. Antonoff | Houston, TX

Hisao Asamura | Tokyo, Japan

Ko Bando | Tokyo, Japan

Stefano Benussi | Milan, Italy

Alessandro Brunelli | Leeds, United Kingdom

Adriano Carotti | Rome, Italy

Keneng Chen | Beijing, China

Albert T. Cheung | Philadelphia, PA

Traves D. Crabtree | Springfield, IL

Steven R. DeMeester | Los Angeles, CA

Jessica S. Donington | New York, NY

Yves d'Udekem | Melbourne, Australia

Fred H. Edwards | Jacksonville, FL

Pirooz Eghtesady | St Louis, MO

Anthony L. Estrera | Houston, TX

Wentao Fang | Shanghai, China

Farhood Farjah | Seattle, WA

Felix G. Fernandez | Atlanta, GA

Hiran C. Fernando | Boston, MA

Seth D. Force | Atlanta, GA

Robert C. Gorman | Philadelphia, PA

Michael Grimm | Vienna, Austria

#### THE ANNALS OF THORACIC SURGERY

Eugene A. Grossi | New York, NY

Kristine J. Guleserian | Miami, FL

Jie He | Beijing, China

George L. Hicks Jr | Rochester, NY

Tain-Yen Hsia | London, United Kingdom

G. Chad Hughes IV | Durham, NC

S. Adil Husain | San Antonio, TX

Jeffrey P. Jacobs | St Petersburg, FL

Tara Karamlou | Phoenix, AZ

Anthony W. Kim | Los Angeles, CA

Ki-Bong Kim | Seoul, Republic of Korea

Arkalgud Sampath Kumar | Delhi, India

Damien J. LaPar | New York, NY

Eric J. Lehr | Seattle, WA

Scott A. LeMaire | Houston, TX

Nader Moazami | Cleveland, OH

Susan D. Moffatt-Bruce | Columbus, OH

Nahush A. Mokadam | Seattle, WA

David L. S. Morales | Cincinnati, OH

Yoshifumi Naka | New York, NY

Sara K. Pasquali | Ann Arbor, MI

Mark D. Rodefeld | Indianapolis, IN

Evelio Rodriguez | Nashville, TN

Lindsey L. Saint | St Louis, MO

Shunji Sano | San Francisco, CA

Isabelle Schmitt-Opitz | Zurich, Switzerland

Joseph B. Shrager | Stanford, CA

Vinod H. Thourani | Washington, DC

Thomas K. Varghese Jr | Salt Lake City, UT

Thomas Walther | Nauheim, Germany

Song Wan | Hong Kong, China

Daniel Wendt | Essen, Germany

Rashmi Yadav | London, United Kingdom

Jian Zhuang | Guangzhou, China

# **Accreditation Committee for Perfusion Education (AC-PE)**

Thomas E. MacGillivray | Houston, TX

James S. Tweddell | Cincinnati, OH

## American Association for Thoracic Surgery (AATS)

Education Committee/Postgraduate Course Advisory Subcommittee

Himanshu J. Patel | Ann Arbor, MI

Scientific Affairs and Government Relations Committee

Keith A. Horvath | Washington, DC

# **American Board of Thoracic Surgery (ABTS)**

Bryan F. Meyers (Chair) | St Louis, MO

Joe B. Putnam Jr (Vice Chair) | Jacksonville, FL

Joseph A. Dearani | Rochester, MN

John D. Mitchell | Aurora, CO

# American College of Cardiology (ACC)

Appropriate Use Criteria for Severe Symptomatic Aortic Stenosis Writing Committee

Michael J. Mack | Dallas, TX

 $\label{lem:appropriate} Appropriateness \ Criteria \ on \ Imaging \ for \ Transcatheter \ Aortic \ Valve \ Replacement \ (TAVR)$ 

Himanshu J. Patel | Ann Arbor, MI

Coding and Nomenclature Committee

Stephen J. Lahey (Special Liaison) | Farmington, CT

National Cardiovascular Data Registry (NCDR) Science and Quality Oversight Committee (SQOC)

David M. Shahian | Boston, MA

# American College of Cardiology Foundation/American Heart Association (ACCF/AHA)

2015 Guideline for the Management of Adults with Congenital Heart Disease Writing Committee

Joseph A. Dearani | Rochester, MN

2017 Organization of Care for Patients with Valvular Heart Disease Writing Committee

Joseph E. Bavaria | Philadelphia, PA

Guideline Focused Update on Atrial Fibrillation Writing Committee

Joseph C. Cleveland Jr | Aurora, CO

# American College of Cardiology/American Association for Thoracic Surgery/Society for Cardiovascular Angiography and Interventions/The Society of Thoracic Surgeons (ACC/AATS/SCAI/STS)

2017 Expert Consensus Statement: Operator and Institutional Requirements for Transcatheter Aortic Valve Replacement

Joseph E. Bavaria | Philadelphia, PA

Thomas G. Gleason | Pittsburgh, PA

Richard J. Shemin | Los Angeles, CA

Vinod H. Thourani | Washington, DC

# American College of Cardiology/American Heart Association (ACC/AHA)

2018 Guideline on the Management of Patients with Bradycardia

James R. Edgerton | Dallas, TX

# American College of Radiology (ACR)

Appropriateness Criteria Expert Panels on Thoracic Imaging and Radiation Oncology-Lung

Traves D. Crabtree | Springfield, IL

Mark D. Iannettoni | Greenville, NC

Appropriateness Criteria Writing Committee on Suspected Thoracic Aortic Aneurysm

Ali Khoynezhad | Los Angeles, CA

Appropriateness Criteria Writing Committee on Thoracic Aorta Interventional Planning and Follow-Up

Eric E. Roselli | Cleveland, OH

#### **American College of Surgeons (ACS)**

Advisory Council for Cardiothoracic Surgery

James I. Fann | Stanford, CA

Joseph F. Sabik III | Cleveland, OH

Board of Regents

Douglas E. Wood | Seattle, WA

Board of Governors

Richard J. Shemin | Los Angeles, CA

Commission on Cancer

Leslie J. Kohman | Syracuse, NY

# American Geriatrics Society (AGS)

Council of the Section for Enhancing Geriatric Understanding and Expertise Among Surgical and Medical Specialists

Joseph C. Cleveland Jr | Aurora, CO

Mark R. Katlic | Baltimore, MD

Ronald M. Weintraub (Alternate) | Cambridge, MA

#### American Heart Association (AHA)

Cardiovascular Clinical Working Group

David M. Shahian | Boston, MA

# American Heart Association/American Stroke Association (AHA/ASA)

Council on Cardiovascular Surgery and Anesthesia

John S. Ikonomidis | Chapel Hill, NC

#### **American Hospital Association (AHA)**

Committee on Clinical Leadership

Jeffrey P. Gold | Omaha, NE

#### American Medical Association (AMA)

House of Delegates

Jeffrey P. Gold | Omaha, NE

Robert M. Vanecko (Alternate) | Chicago, IL

Current Procedural Terminology (CPT) Advisory Committee

Francis C. Nichols III | Rochester, MN

Jeffrey P. Jacobs (Alternate) | St Petersburg, FL

Relative Value Update Committee (RUC)

Verdi J. DiSesa | Philadelphia, PA

Joseph C. Cleveland Jr (Alternate) | Aurora, CO

James M. Levett (RUC Advisory Committee) | Cedar Rapids, IA

# American Society of Clinical Oncology (ASCO)

Gastrointestinal Cancer Symposium Program Committee

Gail E. Darling | Toronto, Canada

K. Robert Shen | Rochester, MN

# American Society of Clinical Oncology/American Society of Radiation Oncology/The Society of Thoracic Surgeons (ASCO/ASTRO/STS)

Thoracic Symposium Steering Committee

Jessica S. Donington | New York, NY

Richard I. Whyte | Boston, MA

Thoracic Symposium Program Committee

David T. Cooke | Sacramento, CA

Melanie A. Edwards | St Louis, MO

Mark K. Ferguson | Chicago, IL

Linda W. Martin | Charlottesville, VA

#### American Society of Echocardiography (ASE)

Guidelines for the Use of TEE to Assist with Surgical Decision-Making in the Operating Room: A Surgery-Based Approach Writing Committee

Niv Ad | Morgantown, WV

Francis D. Pagani | Ann Arbor, MI

## American Thoracic Society (ATS)

Joseph LoCicero III | Mobile, AL

# American Thoracic Society/Society of Thoracic Radiology/The Society of Thoracic Surgeons (ATS/STR/STS)

Guidelines for the Management of Malignant Pleural Effusions Writing Committee

Malcolm M. DeCamp | Chicago, IL

## Cardiothoracic Surgery Network, Inc (CTSNet)

Board of Directors

Douglas E. Wood (President) | Seattle, WA

Pavan Atluri | Philadelphia, PA

David T. Cooke | Sacramento, CA

Joseph F. Sabik III | Cleveland, OH

#### Cardiovascular Relative Value Update Committee (CV RUC)

Stephen J. Lahey | Farmington, CT

MACRA Episode Based Resource Use Measures Clinical Committee

Jeffrey B. Rich | Cleveland, OH

Cameron D. Wright | Boston, MA

Physician Compare Quality Measurement Technical Expert Panel (TEP)

Jeffrey P. Jacobs | St Petersburg, FL

Star Ratings Expert Panel

David M. Shahian | Boston, MA

# **Commission on Accreditation of Allied Health Education Programs** (CAAHEP)

Thomas E. MacGillivray | Houston, TX

#### Congenital Heart Public Health Consortium (CHPHC)

Steering Committee

James S. Tweddell | Cincinnati, OH

## **Council on Medical Specialty Societies (CMSS)**

Richard J. Shemin | Los Angeles, CA

#### **European Association for Cardio-Thoracic Surgery (EACTS)**

Congenital Surgery Database Working Group

Jeffrey P. Jacobs | St Petersburg, FL

# European Association for Cardio-Thoracic Surgery/American Association for Thoracic Surgery/The Society of Thoracic Surgeons (EACTS/AATS/STS)

International Valve Sizing Initiative Project

G. Michael Deeb | Ann Arbor, MI

Bruce W. Lytle | Bainbridge Township, OH

#### **Fellowship Council**

Board of Directors

Ralph W. Aye | Seattle, WA

Accreditation Committee

Walter J. Scott | Abington, PA

Jonathan D'Cunha | Pittsburgh, PA

Education/Curriculum Committee

James D. Luketich | Pittsburgh, PA

## **Heart Rhythm Society (HRS)**

2017 HRS/EHRA/APHRS/ECAS/SOLAECE Expert Consensus Statement on Catheter and Surgical Ablation of Atrial Fibrillation Writing Committee

Vinay Badhwar | Morgantown, WV

James R. Edgerton | Dallas, TX

Richard Lee | St Louis, MO

# Multisociety 2021 US Bid Multi-Specialty Organizing Committee for World Congress of Pediatric Cardiology and Cardiac Surgery

John E. Mayer Jr | Boston, MA

#### **National Quality Forum (NQF)**

Frederick L. Grover (Voting Representative) | Aurora, CO

Board of Directors

David M. Shahian | Boston, MA

Cardiovascular Steering Committee

Joseph C. Cleveland Jr | Aurora, CO

Executive Committee

David M. Shahian | Boston, MA

Measure Applications Partnership Hospital Workgroup

Jeffrey P. Jacobs | St Petersburg, FL

Physician Advisory Panel

David M. Shahian | Boston, MA

Surgery Steering Committee

Frederick L. Grover | Aurora, CO

Scientific Methods Panel

Paul A. Kurlansky | New York, NY

## **Patient-Centered Outcomes Research Institute (PCORI)**

Advisory Panel on Assessment of Prevention, Diagnosis, and Treatment Options

Felix G. Fernandez | Decatur, GA

Advisory Panel on Improving Healthcare Systems

Leah M. Backhus | Stanford, CA

# **Physician Consortium for Performance Improvement (PCPI)**

Joseph C. Cleveland Jr (Voting Representative) | Aurora, CO

Foundation Board of Directors

David M. Shahian | Boston, MA

Measure Advisory Committee (MAC)

Vinay Badhwar | Morgantown, WV

National Quality Registry Network (NQRN)

David M. Shahian (Co-Chair) | Boston, MA

Technical Expert Panel on PQRS#44 Preoperative Beta-Blocker in Patients with Isolated CABG Surgery

Jeffrey P. Jacobs | St Petersburg, FL

# Physician Consortium for Performance Improvement/Pew Charitable Trust (PCPI/Pew)

Data Standards Steering Committee

David W. Wormuth | Syracuse, NY

#### Society for Advancement of Blood Management (SABM)

Victor A. Ferraris | Lexington, KY

#### Society of Cardiovascular Anesthesiologists (SCA)

Quality and Safety Leadership Committee

Gaetano Paone | Detroit, MI

#### Surgical Quality Alliance (SQA)

Executive Committee

Fred H. Edwards | Jacksonville, FL

## The Society of Thoracic Surgeons/American College of Cardiology (STS/ACC)

TVT Registry Steering Committee

Joseph E. Bavaria (Chair) | Philadelphia, PA

Thomas G. Gleason | Pittsburgh, PA

Jeffrey P. Jacobs | St Petersburg, FL

S. Chris Malaisrie | Chicago, IL

Vinod H. Thourani | Washington, DC

#### STS REPRESENTATIVES & CONTACTS

TVT Registry Research & Publications Subcommittee

Vinod H. Thourani (Chair) | Washington, DC

Joseph C. Cleveland Jr | Aurora, CO

Juan P. Crestanello | Columbus, OH

Thomas G. Gleason | Pittsburgh, PA

Jeffrey P. Jacobs | St Petersburg, FL

S. Chris Malaisrie | Chicago, IL

Michael J. Reardon | Houston, TX

## The Society of Thoracic Surgeons/The Society for Vascular Surgery Foundation

Writing Committee on Reporting Standards for Type B Aortic Dissection

Jehangir Appoo | Calgary, Canada

Joseph E. Bavaria | Philadelphia, PA

Karen M. Kim | Ann Arbor, MI

Bradley G. Leshnower | Atlanta, GA

T. Brett Reece | Aurora, CO

Eric S. Weiss | Milwaukee, WI

#### The Thoracic Surgery Foundation (TSF)

Board of Directors

Douglas E. Wood (President) | Seattle, WA

Joseph E. Bavaria (Vice President) | Philadelphia, PA

Joseph F. Sabik III (Secretary) | Cleveland, OH

Shanda H. Blackmon (Treasurer) | Rochester, MN

Mark S. Allen | Rochester, MN

John H. Calhoon | San Antonio, TX

David A. Fullerton | Aurora, CO

Robert S. D. Higgins | Baltimore, MD

Keith S. Naunheim | St Louis, MO

Richard N. Pierson | Baltimore, MD

Vinod H. Thourani | Washington, DC

#### **Thoracic Surgery Directors Association (TSDA)**

A.J. Carpenter | San Antonio, TX

Sandra L. Starnes | Cincinnati, OH

Ara A. Vaporciyan | Houston, TX

#### **United Healthcare Services (UHC)**

Cardiac Scientific Advisory Board

Fred H. Edwards | Jacksonville, FL

#### **CENTERS FOR MEDICARE & MEDICAID SERVICES**

#### **Arkansas Medicare Contractor Advisory Committee**

Russell H. Wood | Fayetteville, AR

Nicky L. Pipkin (Alternate) | El Dorado, AR

#### **Colorado Medicare Contractor Advisory Committee**

Muhammad Aftab | Aurora, CO

#### **Delaware Medicare Contractor Advisory Committee**

Ray A. Blackwell (Alternate) | Newark, DE

#### **Georgia Medicare Contractor Advisory Committee**

Kirk R. Kanter | Atlanta, GA

Seth D. Force (Alternate) | Atlanta, GA

#### **Kentucky Medicare Contractor Advisory Committee**

Peter P. McKeown | Nicholasville, KY

Mark S. Slaughter | Louisville, KY

#### **Louisiana Medicare Contractor Advisory Committee**

Edgar L. Feinberg | Houma, LA

#### **Maryland Medicare Contractor Advisory Committee**

Daniel P. Harley | Glen Arm, MD

#### **Michigan Medicare Contractor Advisory Committee**

Frank A. Baciewicz | Detroit, MI

Reza Robert Dabir | Dearborn, MI

#### **Mississippi Medicare Contractor Advisory Committee**

Lawrence L. Creswell | Jackson, MS

#### **Missouri Medicare Contractor Advisory Committee**

Charles C. Canver | Osage Beach, MO

Nabil A. Munfakh | St Louis, MO

#### **Nebraska Medicare Contractor Advisory Committee**

Rudy P. Lackner | Omaha, NE

HelenMari Louise Merritt | Omaha, NE

#### **New Jersey Medicare Contractor Advisory Committee**

Mark J. Krasna | Neptune, NJ

Mark J. Russo (Alternate) | Newark, NJ

#### CMS CONTRACTOR ADVISORY COMMITTEES

#### **Ohio Medicare Contractor Advisory Committee**

Michael G. Moront | Toledo, OH

Daniel P. Raymond | Shaker Heights, OH

#### **New Mexico Medicare Contractor Advisory Committee**

Jorge A. Wernly | Albuquerque, NM

#### **Oklahoma Medicare Contractor Advisory Committee**

David W. Vanhooser | Edmond, OK

#### **Pennsylvania Medicare Contractor Advisory Committee**

Walter E. Pae | Hershey, PA

#### **Texas Medicare Contractor Advisory Committee**

Mitchell J. Magee | Dallas, TX

### **PAST MEETINGS & LEADERSHIP**

Meeting	President
1965 - St Louis	Paul C. Samson*
1966 - Denver	Paul C. Samson*
1967 - Kansas City	Thomas H. Burford*
1968 - New Orleans	Donald L. Paulson*
1969 - San Diego	Lyman A. Brewer III*
1970 - Atlanta	Donald B. Effler*
1971 - Dallas	Will C. Sealy*
1972 - San Francisco	Robert G. Ellison*
1973 - Houston	Benson B. Roe*
1974 - Los Angeles	Earle B. Kay*
1975 - Montreal	Herbert E. Sloan*
1976 - Washington, DC	Ralph D. Alley*
1977 - San Francisco	Thomas B. Ferguson*
1978 - Orlando	F. Henry Ellis Jr*
1979 - Phoenix	Harold V. Liddle*
1980 - Atlanta	Paul C. Adkins*
1982 - New Orleans	Jay L. Ankeney*
1982 - New Orleans	Anthony R. C. Dobell*
1983 - San Francisco	Hassan Najafi*
1984 - San Antonio	Harold C. Urschel Jr*
1985 - Phoenix	George J. Magovern Sr*
1986 - Washington, DC	Albert Starr
1987 - Toronto	Charles R. Hatcher Jr
1988 - New Orleans	Hermes C. Grillo*
1989 - Baltimore	George G. Lindesmith*
1990 - Chicago**	W. Gerald Rainer *
1991 - San Francisco	W. Gerald Rainer *
1992 - Orlando	Robert W. Jamplis*
1993 - San Antonio	Vincent L. Gott
1994 - New Orleans	Denton A. Cooley*
1995 - Palm Springs	Benson R. Wilcox*
1996 - Orlando	John R. Benfield
1997 - San Diego	Robert L. Replogle*
1998 - New Orleans	George C. Kaiser
1999 - San Antonio	Richard P. Anderson*
2000 - Fort Lauderdale	Nicholas T. Kouchoukos
2001 - New Orleans	Jack M. Matloff*
2002 - Fort Lauderdale	Mark B. Orringer
2003 - San Diego	William A. Baumgartner
2004 - San Antonio	Robert A. Guyton
2005 - Tampa	Peter C. Pairolero
2007 01:	C+1 T + 1

<sup>\*</sup>Deceased

2006 - Chicago

Sidney Levitsky

<sup>\*\*</sup>Special Meeting

#### PAST MEETINGS & LEADERSHIP

#### Secretary

Francis X. Byron\* Francis X. Byron\* Francis X. Byron\* Francis X. Byron\* John N. Briggs\* Ralph D. Alley\* Thomas D. Bartley\* W. Gerald Rainer \* George C. Kaiser Richard P. Anderson\* Peter C. Pairolero

\*Deceased

Peter C. Pairolero

Peter C. Pairolero

Peter C. Pairolero

Peter C. Pairolero

Gordon F. Murray

Douglas E. Wood

#### Treasurer

Robert G. Ellison\* Jay L. Ankeney\* Harold C. Urschel Jr\* Benson R. Wilcox\* Robert L. Replogle\* Nicholas T. Kouchoukos Robert A. Guyton Douglas J. Mathisen Douglas J. Mathisen Douglas J. Mathisen

Douglas J. Mathisen

#### **PAST MEETINGS & LEADERSHI**

#### Meeting

2007 - San Diego

2008 - Fort Lauderdale

2009 - San Francisco

2010 - Fort Lauderdale

2011 - San Diego

2012 - Fort Lauderdale

2013 - Los Angeles

2014 - Orlando

2015 - San Diego

2016 - Phoenix 2017 - Houston

#### **President**

Frederick L. Grover

John E. Mayer Jr

W. Randolph Chitwood Jr

Gordon F. Murray

Douglas J. Mathisen

Michael J. Mack

Jeffrey B. Rich

Douglas E. Wood David A. Fullerton

Mark S. Allen

Joseph E. Bavaria

#### **PAST MEETINGS & LEADERSHIP**

#### Secretary

Douglas E. Wood
Douglas E. Wood
Douglas E. Wood
Douglas E. Wood
David A. Fullerton
David A. Fullerton
Cavid A. Fullerton
Keith S. Naunheim

#### **Treasurer**

Douglas J. Mathisen Carolyn E. Reed\* Robert S. D. Higgins Robert S. D. Higgins Robert S. D. Higgins Robert S. D. Higgins Robert S. D. Higgins

#### **AWARDS & LECTURES**

#### **HONORARY MEMBERS**

Wilfred G. Bigelow C. Rollins Hanlon

Mark V. Braimbridge Dwight C. McGoon

Philippe G. Dartevelle Donald N. Ross

Charles DuBost Ake Senning

William W. L. Glenn Harris B. Shumacker Jr

#### **DISTINGUISHED SERVICE AWARD**

The Distinguished Service Award recognizes outstanding contributions to the Society.

1969 - John D. Steele 2006 - Gordon F. Murray 1970 - Paul C. Samson 2006 - Mark B. Orringer 1972 - Lyman A. Brewer III 2007 - Fred H. Edwards 1975 - Robert G. Ellison 2007 - Peter K. Smith 1977 - Ralph D. Alley 2008 - Betsy Bradley Urschel 1981 - Herbert E. Sloan 2008 - Jeffrey B. Rich 1991 - Thomas B. Ferguson 2010 - John E. Mayer Jr 1998 - W. Gerald Rainer 2010 - Frederick L. Grover 1998 - Harold C. Urschel Jr 2011 - L. Henry Edmunds Jr 1999 - Jack M. Matloff 2012 - Robert M. Sade 2013 - Carolyn E. Reed 2000 - Robert L. Replogle 2001 - Timothy J. Gardner (posthumously) 2001 - Sidney Levitsky 2013 - Michael J. Mack

2001 - George E. Miller2014 - Douglas J. Mathisen2002 - Richard G. Sanderson2015 - William A. Baumgartner2003 - Benson R. Wilcox2016 - Robert A. Guyton2004 - Richard P. Anderson2017 - David M. Shahian

2005 - Nicholas T. Kouchoukos

#### EARL BAKKEN SCIENTIFIC ACHIEVEMENT AWARD

This award was established through a grant from Medtronic, Inc, to recognize individuals who have made outstanding scientific contributions that have enhanced the practice of cardiothoracic surgery and quality of life for cardiothoracic surgery patients.

2000 - Gerald D. Buckberg2009 - James J. Cox2001 - Rene G. Favaloro2010 - Mark B. Orringer2001 - W. Dudley Johnson2011 - Philippe Menasche2002 - Hermes C. Grillo2012 - Sidney Levitsky2003 - Denton R. Cooley2013 - D. Craig Miller2004 - Richard D. Weisel2014 - G. Alexander Patterson

2005 – Randall B. Griepp2015 – Irving L. Kron2006 – Vincent L. Gott2016 – Frederick L. Grover2007 – Joel D. Cooper2017 – Eric A. Rose

2008 - William A. Baumgartner

#### PRESIDENT'S AWARD

Selected by the STS President, the recipient of this award is recognized for submitting the best scientific abstract to the Annual Meeting by a lead author who is either a resident or a young investigator who has completed his or her training within the last 5 years.

2011 – Michael Ko2015 – Justin M. Schaffer2012 – Mark J. Russo2015 – Kenan W. Yount2013 – Matthew L. Williams2016 – Paul J. Speicher2014 – Tarek Malas2017 – Panos Vardas

#### TSDA BENSON R. WILCOX AWARD

This award acknowledges the best scientific abstract submitted by a cardiothoracic surgery resident to the Annual Meeting.

2010 – Mark J. Russo2014 – Fenton H. McCarthy2011 – Harald C. Ott2015 – Damien J. LaPar2012 – Farhood Farjah2016 – George Arnaoutakis2013 – Bryan A. Whitson2017 – Carlo Bartoli

#### **TSRA SOCRATES AWARD**

This award is given to an outstanding faculty member in cardiothoracic surgery in recognition of his or her commitment to resident education and mentorship.

2001 – Mark J. Stout2010 – William A. Baumgartner2002 – Mark B. Orringer2011 – Lyle D. Joyce2003 – William A. Baumgartner2012 – George L. Hicks Jr2004 – Bruce W. Lytle2013 – Carolyn E. Reed2005 – Edward D. Verrier(posthumously)

2006 – John A. Elefteriades 2014 – John A. Kern 2007 – Richard C. Daly 2015 – Mark D. Iannettoni 2007 – Valerie W. Rusch 2016 – Yoshifumi Naka 2008 – Patrick M. McCarthy 2017 – Duke E. Cameron

2009 – Robert A. Guyton

#### **HERBERT E. SLOAN LECTURERS**

1988 – Joel D. Cooper
 1995 – Robert H. Anderson
 1992 – Mark V. Braimbridge
 1996 – Philippe G. Dartevelle

#### **RALPH D. ALLEY LECTURERS**

1991 – Harry Schwartz1999 – Miles F. Shore1997 – Yasuharu Imai2000 – Hans G. Borst1998 – Vincent L. Gott2001 – William R. Brody

#### **AWARDS & LECTURES**

#### **THOMAS B. FERGUSON LECTURERS**

2001 - William H. Frist 2010 - Jeffrey B. Rich 2002 - Shukri F. Khuri 2011 - Atul Gawande 2003 - David A. Kessler 2012 - Jeffrey E. Shuren 2004 - Donald J. Palmisano 2013 - Mark B. McClellan 2014 - Bassem Youssef 2005 - James P. Bagian 2006 - David P. Taggart 2015 - Pedro J. del Nido 2007 - William H. Frist 2016 - Scott E. Parazynski 2008 - Elizabeth O. Tiesberg 2017 - Ralph W. Muller 2009 - Bruce E. Keogh

#### C. WALTON LILLEHEI LECTURERS

2009 – Doris A. Taylor2014 – Shaf H. Keshavjee2010 – William A. Neal2015 – Patrick T. O'Gara2011 – Joseph P. Vacanti2016 – Gary Taubes2012 – Friedrich W. Mohr2017 – Samer Nashef2013 – Carolyn M. Clancy2018 – Laura J. Snyder

#### The Thoracic Surgery Foundation

#### Your foundation for research and education

The Thoracic Surgery Foundation is a pivotal force for growth and vitality in cardiothoracic surgery, especially for research and academic career development. Founded in 1988, TSF is the charitable arm of STS.

The foundation represents cardiothoracic surgery in the United States, and its research and education initiatives support the entire specialty. The mission of TSF is to foster the development of surgeon scientists in cardiothoracic surgery, increasing knowledge and innovation to benefit patient care.

In 2017, TSF awarded a total of \$702,500: \$405,000 in research grants, \$45,000 in education grants, \$200,000 in surgical outreach mission grants, \$25,000 in leadership scholarships, \$25,000 in travel awards, and \$2,500 for the best abstract presentation. A detailed list follows.

In order to continue providing this type of support, TSF depends on your contributions. Today's research will become tomorrow's practice, and today's young surgeons will help drive tomorrow's heath care policies. Your donations to TSF have a direct impact on the future of cardiothoracic surgery and the welfare of cardiothoracic surgery patients.

If you would like to make a pledge or receive more information about giving opportunities, visit www.thoracicsurgeryfoundation.org or contact Priscilla S. Kennedy, TSF Executive Director, at 312-202-5868 or pkennedy@sts.org.

#### 2017 TSF RESEARCH AWARD RECIPIENTS

TSF Research Grant: Operational support of original research efforts by cardiothoracic surgeons who have completed their formal training and who are seeking initial support and recognition for their research program. Awards of up to \$40,000 a year for up to 2 years are made annually to support the work of early career cardiothoracic surgeons (within 7 years of first faculty appointment).

> David D. Odell - Northwestern University Development of a Novel Lung Cancer Collaborative in Illinois

Hiroo Takayama – Columbia University Novel Noninvasive Assessment of Mechanical Stress on Aortic Valve During Continuous-Flow Left Ventricular Assist Device

STS Research Award: Operational support of original research efforts by cardiothoracic surgeons who have completed their formal training and who are seeking initial support and recognition for their research program. Awards of up to \$40,000 a year for up to 2 years are made annually to support the work of early career cardiothoracic surgeons (within 7 years of first faculty appointment). The STS Research Award designation is given to the highest-ranking TSF research application awarded by TSF based on merit as judged by a rigorous peer review process.

> David M. Hoganson – Boston Children's Hospital Endothelialized Vascular Scaffold for Lung Engineering

STSA Research Award: TSF, through the generosity and philanthropy of the Southern Thoracic Surgical Association, offers operational support of original research efforts by cardiothoracic surgeons who have completed their formal training and who are seeking initial support and recognition for their research program. Awards of up to \$25,000 for 1 year will be granted to support the work of an early career cardiothoracic surgeon (within 7 years of first faculty appointment). STSA membership is not required; however, applicants must meet STSA membership eligibility requirements.

> Anson M. Lee – Stanford University School of Medicine Identifying the Common Final Pathway in Postoperative Atrial Fibrillation With Transcriptome Profiling

Nina Starr Braunwald Research Award: Nina Starr Braunwald, MD was the first woman to be certified by the ABTS and the first woman to conduct open heart surgery. This award in her name provides operational support of original research efforts by women cardiac surgeons who have completed their formal training and who are seeking initial support and recognition for their research program. Awards of up to \$40,000 per year for up to 2 years are made annually to support the work of an early career woman cardiac surgeon (within 5 years of first faculty appointment).

> Maral Ouzounian - Toronto General Hospital Biomechanical and Metabolic Properties of Proximal Aortic Aneurysms in Patients With Bicuspid Aortic Valves

Nina Starr Braunwald Research Fellowship Award: Support of up to \$30,000 per year for up to 2 years for a woman resident working in a cardiac surgical clinic or laboratory research program who has not yet completed cardiothoracic surgical training.

> Lauren V. Huckaby – University of Pittsburgh Medical Center Estrogen and Sex Differences in Bicuspid and Tricuspid Aortic Valve Thoracic Aortic Aneurysm

#### 2017 TSF EDUCATION AWARD RECIPIENTS

Carolyn E. Reed Traveling Fellowship: Support of \$10,000 for a clinically established woman cardiothoracic surgeon or woman resident in her last year of cardiothoracic surgery residency to travel to another institution for the purpose of learning a new skill or technology.

> Lisa M. Brown - UC Davis School of Medicine University of Michigan Health Services Research Traveling Fellowship

> Lauren C. Kane – Baylor College of Medicine Learning Surgical Strategies With Later Presenting Congenital Heart Disease in India and Beyond

Michael J. Davidson Fellowship Award: Michael J. Davidson, MD was an outstanding cardiothoracic surgeon and teacher, who was murdered in January 2015 at Brigham and Women's Hospital in Boston. This award in his name will provide annual support of \$25,000 for a deserving early career cardiothoracic surgeon (within 7 years of first faculty appointment) committed to the vision of innovative and collaborative cardiovascular care that Dr. Davidson helped pioneer.

> Brian T. Plunkett - Brigham and Women's Hospital Clinical Fellowship in Endovascular Cardiac Surgery

#### 2017 TSF SURGICAL OUTREACH MISSION RECIPIENTS

TSF/Edwards Lifesciences Foundation Every Heartbeat Matters Award: Support of up to \$37,500 for programs that educate, screen, and/or treat underserved populations to reduce the global burden of heart valve disease, or to support other programs that advance health care and address underserved populations.

> Reshma M. Biniwale - University of California Los Angeles Hearts with Hope Foundation in Peru

R. Morton Bolman III - University of Vermont Medical Center Addressing the Burden of Rheumatic Heart Disease in Rwanda: A Plan for Future Sustainability

Frederick L. Grover - University of Colorado Enhancing Access to Care and Treatment of Cardiovascular Disease in Nepal

Reza A. Khodaverdian - Stanford University School of Medicine VOOM Foundation in Nigeria

Pranava Sinha - Children's Research Institute Management of Rheumatic Heart Disease in Uganda

Luca A. Vricella - Johns Hopkins University Pediatric Cardiac Surgery Mission to Cambodia

#### 2017 TSF LEADERSHIP SCHOLARSHIP RECIPIENTS

Levi Watkins Innovation and Leadership Development Scholarship: Levi Watkins, MD was an accomplished cardiothoracic surgeon and social activist at Johns Hopkins Medical Center who made medical history by working with innovative physicians and engineers to implant the first automated internal cardiac defibrillator in a human being. The Watkins Scholarship supports travel to a center of excellence for acquiring additional clinical, translational, or leadership training that will enhance skills and practice in an area of innovation or surgical significance. This award provides support of up to \$5,000 for up to 2 weeks for cardiothoracic surgeons who are within 7 years of first faculty appointment.

> Errol L. Bush – The Johns Hopkins University Development of a Successful Ex Vivo Lung Perfusion Program at Toronto General Hospital

TSF Alley-Sheridan/Leadership Program in Health Policy and Management Scholarships: TSF offers up to 10 partial scholarships of \$2,500 toward the \$5,200 cost to attend the Leadership Program in Health Policy and Management at the Heller School of Public Policy and Management at Brandeis University.

Stephen R. Broderick - The Johns Hopkins University

Christopher M. Genco – Beebe Healthcare

Chuong D. Hoang - National Cancer Institute, National Institutes of Health

Ravi Ghanta - Baylor College of Medicine

Vigneshwar Kasirajan – VCU Health

Susan D. Moffatt-Bruce - The Ohio State University

Meena Nathan - Boston Children's Hospital

Anastasios C. Polimenakos - Children's Hospital of Georgia/ Medical College of Georgia

Alexander Roitstein - Aurora BayCare Medical Center

Elaine Tseng - University of California San Francisco

#### 2017 TSF TRAVEL AWARDS

TSF Latin America CT Surgery Conference Travel Awards: Travel awards of \$1,000 were awarded to cardiothoracic surgeons who treat underserved patients and who demonstrated a financial need to attend the STS/EACTS Latin America Cardiovascular Surgery Conference on September 21-22, 2017, in Cartagena, Colombia. Additional \$1,000 scholarships were awarded to surgeons to attend the STS 54th Annual Meeting, for a grand total of \$25,000 in travel scholarships awarded in 2017.

Juan Carlos Bahamondes

Temuco, Chile

Norberto Cesar Blanco

Buenos Aires, Argentina

Enzo A. Borzellino

Barquisimeto, Venezuela

Carlos A. Fernandez

Tacna, Perú

Manuel Giraldo Grueso

Bogotá, Colombia

Mauricio Damian Gomez-Gonzalez

Ciudad de México, México

#### Ricardo Guzman Gonzalez

Durango, México

#### Blas Fabián González

Asunción, Paraguay

#### José M. Gutiérrez García

Mérida, México

#### Benjamin I. Hernandez

Ciudad de México, México

#### Pedro Horigoshi Reis

São Luís, Brazil

#### David Maldonado

Guayaquil, Ecuador

#### Lorena Montes

Bogotá, Colombia

#### Juan F. Parra

Bogotá, Colombia

#### Diego Pena

Bogotá, Colombia

#### Alberto Alejandro A. Quintero Gomez

La Estrella, Colombia

#### Josías Caleb Ríos

Lima, Perú

#### Lizeth D. Saldaña

Medellín, Colombia

#### Juan B. Umana-Pizano

Bogotá, Colombia

STS/EACTS Award: The STS/EACTS Award for \$2,500 was presented at the STS 53rd Annual Meeting for the best abstract presented during the EACTS @ STS session, as selected by the session planners and the Chair of the European Association for Cardio-Thoracic Surgery's Vascular Domain.

#### Xiaoying Lou – Emory University

The Impact of Thoracic Endovascular Aortic Repair on Long-Term Survival in Type B Aortic Dissection

#### Α

Accola, Kevin D. - 46, 90

Acosta, David - 35

Ahmad, Usman - 51,82

Ailawadi, Gorav - 25, 27, 37, 48, 80, 84, 92, 99

Aiger, Clemens - 57

Al-Ayoubi, Adnan M. - 34

Allan, James S. - 44

Allen, Keith B. - 17, 38

Allen, Keith R. - 42

Allen, Mark S. - 21, 46, 51, 78, 79, 99, 107

Altman, William C. - 19

Anagnostopoulos, Petros V. - 46

Anderson, Rick - 21

Ando, Makoto - 49

Antonoff, Mara B. - 29, 31, 53, 82, 91, 93, 99

Antonopoulos, Achilleas C. – 52

Appoo, Jehangir J. - 53, 80, 107

Aprile, Vittorio - 52

Arabia, Francisco A. - 19, 96

Arora, Rakesh C. - 24, 25, 94

Atay, Scott M. - 60

Atluri, Pavan - 37, 38, 55, 92, 96, 104

Awad, Wael I. - 39

Aye, Ralph W. - 60, 105

Azizzadeh, Ali - 42

#### В

Babu, Ashok N. - 43

Backer, Carl L. - 40, 80

Badhwar, Vinay - 20, 26, 28, 33, 37, 58, 86, 88, 92, 93, 105, 106

Bakaeen, Faisal - 47, 86

Baker, Craig J. - 29, 80, 82, 84, 85

Balkhy, Husam H. - 19

Bartlett, Robert H. - 46

Bartley, Tara – 26, 27

Bavaria, Joseph E. - 37, 38, 42, 49, 50, 77, 78, 79, 83, 97, 101, 102, 106, 107, 112

Beamer, Staci - 60

Beck, Adam W. - 43

Bell, Richard S. - 27

Benuzillo, Jose - 58

Bergquist, Curtis S. – 27

Bermudez, Christian A. - 46, 83, 96

Berry, Mark F. - 60, 86

Bhama, Jay K. - 29, 84

Blackmon, Shanda H. - 19, 20, 45, 60, 77, 86, 93, 98, 107

Bolling, Steven F. - 20, 21, 37, 59

Boodhwani, Munir - 55

Borger, Michael A. - 28, 48

Boston, Umar S. - 40

Bremner, Ross M. - 42, 46

Brescia, Alexander A. - 40

Brinkman, William T. - 59

Brinster, Derek R. - 28, 59, 99

Brothers, Julie - 23

Brown, Lisa M. - 18, 51, 81, 118

Buitrago, Daniel H. - 52

Burfeind, William R. - 60

Burt, Bryan M. – 21

Bush, Errol L. - 41, 119

#### C

Calcaterra, Domenico M. - 54

Callstrom, Matthew R. - 18

Cameron, Duke E. - 59, 115

Cassivi, Stephen D. - 57

Ceppa, DuyKhanh P. - 60

Cerfolio, Robert J. - 21, 30, 31, 36, 47, 95

Cervantes, David G. - 54

Chang, Andrew C. - 60, 87

Charles, Eric J. - 58

Chatterjee, Subhasis - 24, 35, 94

Chen, Alex - 25

Chen, Edward P. - 17, 29, 38, 53, 59, 80, 92

Chen, Frederick Y. - 29

Chen, Kezhong - 34

Cheng, Xinghua - 18

Chikwe, Joanna - 35, 99

Chitwood, W. Randolph, Jr - 59, 112

Chiu, Kuan-Ming - 60

Chotivatanapong, Taweesak - 42

Chou, Alan S. - 44

Chu, Michael - 28, 53

Cohn, William E. – 21

Colditz, Graham A. - 45, 98

Colligan, Michael – 26

Colson, Yolonda L. - 20, 31

Conner, William C. - 52, 88

Conte, John V. - 26, 89, 91

Cooke, David T. - 35, 36, 40, 45, 80, 81, 82, 103, 104

Copeland, Jack G. - 46

Coselli, Joseph S. - 42

Costache, Victor - 54

Crabtree, Traves D. - 21, 99, 102

Crawford, Todd C. - 39, 42

Critsinelis, Andre C. - 43

Cypel, Marcelo - 41

#### D

D'Alessandro, David A. - 46

D'Amico, Thomas - 36, 95

D'Cunha, Jonathan - 34, 93, 105

Daniel, Malini P. - 44

David, Tirone E. - 20, 27, 38

De Bonis, Michele – 42

de Hoyos, Alberto - 60

De Paulis, Ruggero - 49, 59

Dean, David A. - 29

Dearani, Joseph A. - 23, 30, 34, 46, 77, 89, 94, 96, 101

DeCamp, Malcolm M. - 44, 104

Deeb, G. Michael - 59, 105

del Nido, Pedro J. - 30, 116

Demmy, Todd L. - 60, 84

Desai, Nimesh - 17, 81, 87, 93

Draft, Christopher M. - 35, 77

Drake, Daniel - 48, 79

Drake, Justin A. - 51

Dunning, Joel - 20, 27, 86

#### Ε

Ebunlomo, Ebun O. - 53

Edwards, Janet P. - 30, 31, 36, 56, 60, 95

Edwards, Melanie A. - 19, 81, 86, 87, 93, 103

Egyud, Matthew R. - 57

El-Khoury, Gebrine - 50

Emani, Sitaram M. – 30

Engel, Jill R. - 27

Espeso, Lauren M. – 27

Espinoza-Mercado, Fernando E. - 58

Estrera, Anthony L. - 42, 54, 99

#### F

Farjah, Farhood - 32, 57, 80, 86, 87, 99, 115

Fazzalari, Frank L. - 24, 92, 93, 95

Fengpu, He F. - 49

Fernandez, Felix G. - 44, 51, 86, 87, 88, 99, 106

Ferrari, Enrico R. - 42, 83, 84

Ferreres, Alberto - 44

Firstenberg, Michael S. - 24, 94

Fischbein, Michael P. - 50, 86, 88

Fraser, Charles D., III - 49

Fraser, Charles D., Jr - 27, 40, 84

Fuller, Stephanie M. - 23, 94, 96

Gammie, James S. – 37, 46, 48, 98

Gangadharan, Sidharta P. - 25, 29, 60, 85

Geirsson, Arnar – 33, 83

Gersak, Borut - 60

Gillinov, A. Marc - 28, 32, 33, 46, 59

Gilmore, Denis M. - 42

Glauber, Mattia - 60

Gleason, Thomas G. - 28, 38, 54, 80, 102, 106, 107

Godoy, Luis - 35

Grandmougin, Daniel - 34

Greason, Kevin L. - 59, 89

Grondin, Sean C. – 36, 77

Grover, Frederick L. - 44, 90, 91, 105, 112, 114, 118

Grubb, Kendra J. - 47

Guleserian, Kristine - 34, 40, 94, 100

Gupta, Ankur - 59

Gustafsson, Finn - 50

Guy, T. Sloane - 20, 21, 33, 48, 59, 80, 81, 92

#### н

Habertheuer, Andreas - 50

Habib, Robert H. - 44

Haft, Jonathan W. - 55, 92, 96

Hall, David J. - 41

Hanley, Frank L. - 23

Hanna, Wael C. - 41

Harpole, David - 57

Harrison, Sebron W. - 58

Hartwig, Matthew G. - 25

Hattori, Aritoshi A. - 41

Hawkins, Robert B. - 54

```
Head, Stuart - 39
Heaton, Michael N. - 24
Heimansohn, David A. - 28
Heo, Woon - 54
Hermes, Paul - 21
Hess, Philip J., Jr-59
Hoffman, George M. - 49
Hofstetter, Wayne L. - 19
Holst, Kimberly A. - 49
Huang, Shu-Chien - 30
Huang, Zeping Z. – 50
Huddleston, Charles B. - 23, 96
Husain, S. Adil - 30, 46, 56, 59, 94, 100
ī
Iribarne, Alexander - 32
J
Jacobs, Jeffrey P. - 44, 86, 87, 89, 93, 100, 103, 104, 105, 106, 107
Jad, Ahmed I. - 36
Jaggers, James - 23, 79
Jaquiss, Robert D. B. - 49, 96, 99
Jaroszewski, Dawn E. - 60
Jassar, Arminder S. – 59
Jeevanandam, Valluvan - 19
Johnston, Douglas R. - 21, 48
Joubert, Kyla D. - 41
Ju, Min Ho - 33
K
Kamel, Mohamed K. - 41
Kaneko, Tsuyoshi K. - 26
Kanter, Kirk R. - 30, 56, 89, 98, 108
Kaplan, Stephen J. - 36
Karamlou, Tara - 32, 88, 100
Kayatta, Michael O. - 50
Keegan, Patricia A. - 26
Keeling, W. Brent - 54
Kelly, John J. - 48, 55
Kent, Michael S. - 30, 52, 88
Kern, John A. - 28, 98, 115
Khoynezhad, Ali - 17, 59, 81, 102
Kilic, Ahmet - 27, 82
Kilic, Arman - 48
Kim, Karen M. - 54, 82, 107
```

Kim, Samuel S. - 51 Kim, Tae Hoon - 39 Kirklin, James K. - 50 Klapper, Jacob A. - 60 Kneuertz, Peter J. - 51 Knight, Peter A. - 60 Ko, Hanjo A. - 55 Kopson, Mark - 24 Kozower, Benjamin D. - 45, 87 Krantz, Seth B. - 51 Kreisel, Daniel - 41 La Francesca, Saverio – 19 Lahey, Stephen J. - 44, 47, 89, 90, 97, 101, 104 Lamelas, Joseph - 17, 28, 46 Lansac, Emmanuel - 17, 50 Lawton, Jennifer S. - 47, 86, 92, 98 Lazar, John F. – 18 Leacche, Marzia - 46, 96 Lee, ChangYoung - 36 Lee, Hyun-Sung - 34 Lee, Richard - 21, 28, 33, 39, 80, 83, 90, 97, 105 Lehr, Eric J. - 60, 100 Leshnower, Bradley G. - 59, 90, 93, 107 Levy, Paul S. - 24, 95 Levy, Ryan M. - 19 Ley, Sondra J. - 26, 27, 93 Liberman, Moishe A. - 18, 25, 36 Licker, Marc - 35 Lin, Jules - 31, 82, 85 Liou, Douglas Z. - 52 Litle, Virginia R. - 31, 82 Lobdell, Kevin W. - 44, 52, 88 Lombardi, Joseph V. - 42, 43 Louie, Brian E. - 19 Low, Donald E. - 46, 86 Luketich, James D. - 19, 21, 47, 57, 80, 81, 98, 105 Lumsden, Alan B. - 43 Lyons, Jefferson - 59 M Ma, Wei-Guo G. - 39

Ma, Wei-Guo G. – 39 Mack, Michael J. – 20, 25, 37, 46, 86, 101, 112, 114 Mahmood, Feroze – 34, 98

Majid, Adnan - 25

Malaisrie, S. Chris - 59, 83, 106, 107

Maltais, Simon - 18, 48, 55

Maly, Jiri - 50

Maniar, Hersh S. - 59

Manoukian, Steven V. - 24

Marasco, Silvana - 28

Martin, Jeremiah - 60

McCarthy, Patrick M. - 33, 115

McDonald, Christine M. - 58

McGinn, Joseph - 28

McMullan, David M. - 30, 46, 82, 84, 94

Meguid, Robert A. - 51, 88

Mehaffey, James H. - 21

Merritt, HelenMari - 27, 108

Merritt, Robert E. - 40, 60

Mery, Carlos M. - 23, 49

Milewski, Rita C. - 24, 46, 82, 94

Miller, Daniel L. - 21, 60, 78

Mitchell, John D. - 60, 79, 101

Mitchell, Michael E. - 35, 49

Mitzman, Brian A. – 57

Miyamoto, Shinka – 34

Moffatt-Bruce, Susan D. - 25, 36, 88, 90, 100, 119

Mohr, Catherine - 21

Mokadam, Nahush A. - 50, 81, 82, 100

Molina, Ezequiel J. - 37

Moosdorf, Rainer G. H. - 35, 94

Morales, David L. - 30, 40, 100

Morell, Victor - 30

Moremen, Jacob - 24, 60

Morgan, Jeffrey A. - 46

Morse, Christopher R. – 51, 80

Muneretto, Claudio C. - 33, 55

Myers, John L. - 46

Myers, Patrick – 56, 83

#### N

Naficy, Sepehre - 59

Naka, Yoshifumi - 46, 96, 100, 115

Nakamura, Yuji N. – 40

Nason, Katie S. - 18

Naunheim, Keith S. - 13, 33, 35, 77, 78, 82, 89, 97, 107, 113

Ndubisi, Nnaemeka M. – 39

Netuka, Ivan - 50

Nguyen, Tom C. - 20, 37, 60, 81

Nichols, Francis C. - 45, 89, 103

Nicoara, Alina - 26

Norman, Geoffrey - 52

Nyman, Charles B. - 26

#### 0

O'Gara, Patrick T. - 37, 38, 116

Oda, Shinichiro - 34

Odell, David D. - 51, 53, 93, 117

Ohye, Richard G. - 30

Olive, Jacqueline - 35

Oliveira, Ricardo - 41

Ommen, Steve - 23

Onaitis, Mark W. - 45, 57, 87

Ong, Chin Siang - 35

Opitz, Isabelle - 57

Orringer, Mark B. - 46, 53, 110, 114, 115

Ota, Noritaka - 49

#### Ρ

Pagani, Francis D. - 23, 38, 46, 87, 92, 104

Pal, Jay D. - 46, 96

Papagiannopoulos, Kostas – 56, 57

Park, Samina - 52

Pasquali, Sara K. - 40, 100

Patel, Himanshu J. - 18, 32, 59, 80, 101

Philpott, Jonathan M. - 28, 84

Pizarro, Christian - 49, 80, 83

Pochettino, Alberto - 59

Podgaetz, Eitan – 27

Port, Jeffrey - 21

Prager, Richard L. - 13, 25, 26, 32, 33, 35, 46, 47, 77, 78, 79, 80

Pretorius, Gert D. – 50

Preventza, Ourania A. - 54, 59, 90

Puri, Varun – 51

#### R

Raad, Wissam - 18

Rabin, Joseph - 35, 94

Rahouma, Mohamed – 57

Ramlawi, Basel - 59

Raza, Sajjad - 39

Reardon, Michael J. - 55, 107

Reddy, Darshan – 42, 83

Reddy, Rishindra M. - 53, 85

Reddy, V. Seenu - 45, 89, 93

Reece, T. Brett - 38, 80, 84, 92, 107

Reed, Michael F. - 20, 81

Rehmani, Sadiq S. – 57

Reznik, Scott I. - 60

Rice, David C. - 19, 31, 84, 95

Richey, Samuel R. - 35

Rieger, Karen M. - 60

Robinson, Aaron - 24

Rodriguez, Evelio - 20, 59, 100

Romano, Matthew A. - 59, 81

Roselli, Eric E. - 18, 42, 84, 102

Rucinskas, Kestutis – 48

Ryan, Liam P. - 59

#### S

Sabik, Joseph F., III - 32, 39, 46, 47, 77, 78, 92, 102, 104, 107

Sade, Robert M. - 44, 98, 114

Safi, Hazim J. - 42, 43

Sako, Edward Y. - 59

Salami, Aitua C. – 58

Salemi, Arash - 17, 18

Salerno, Chris T. - 18, 55, 96

Salfity, Hai V. - 58

Salley, Robert K. - 46

Samy, Sanjay A. - 45, 89

Sanchez, Juan A. - 53

Sanchez, Pablo – 42

Sarkaria, Inderpal S. - 19, 20, 31, 52, 60

Sayer, Gabriel - 50

Schaff, Hartzell V. - 23

Schaheen, Lara W. - 60

Schettle, Sarah D. - 26

Schmitto, Jan - 29

Scholl, Frank G. - 23, 96

Schwann, Thomas A. - 39

Scrimgeour, Laura A. – 34

Settepani, Fabrizio F. - 38

Shah, Asad A. - 29, 82

Shah, Ashish – 25, 55

Shake, Jay G. - 24, 94

Shen, K. Robert - 60, 91, 103

Sheridan, Brett C. - 39, 43, 80

Shernan, Stanton K. - 26

Shiono, Satoshi S. - 41

Shrestha, Malak - 17

Shults, Christian - 37

Silvestry, Scott C. - 45, 55, 89

Singhal, Arun K. - 34

Sivalingam, Sivakumar - 40

Smedira, Nicholas G. - 23, 98

Smith, Robert L. - 20, 27

Snyder, Laura J. - 47, 116

Soleimani, Behzad – 29

Sonett, Joshua R. – 52

Sorajja, Paul – 37, 38

Speir, Alan M. - 24, 87, 89, 97, 98

Spratt, John R. – 53

Stanifer, Bryan P. - 51

Starnes, Sandra L. - 60, 79, 82, 107

Starnes, Vaughn A. – 23, 30

Stelzer, Paul - 46

Stephens, Elizabeth H. - 53, 86

Stirling, Madeleine - 44

Strueber, Martin - 46

Stulak, John M. – 18, 46, 81, 96

Sugarbaker, David J. - 57

Sultan, Ibrahim – 43, 54, 55, 59, 80

Sutcliffe, Kathleen - 24

Sutter, Francis P. – 28

Szeto, Wilson Y. - 28, 42, 43, 54, 80, 84, 98

#### T

Taggart, David P. - 19, 116

Takayama, Hiroo - 29, 117

Tanaka, Akiko K. - 38

Tang, Gilbert H. L. - 20, 48, 81

Tarola, Christopher L. - 43

Thomas, Mathew - 60

Thourani, Vinod H. - 26, 28, 37, 46, 58, 60, 77, 80, 83, 84, 93, 100, 102, 106, 107

Timek, Tomasz - 39

Tong, Betty C. - 32, 40, 51, 60, 81

Treasure, Tom - 56

Trezzi, Matteo - 40

Tsyganenko, Dmytro A. – 43

Turek, Joseph W. - 46, 94

Tweddell, James S. - 23, 30, 32, 40, 46, 80, 92, 94, 96, 101, 104

#### U

Ugalde, Paula A. – 60 Ujiie, Hideki – 34 Umaña, Juan P. – 42, 60, 83 Uriel, Nir - 19, 38, 50

#### ν

Vallabhajosyula, Prashanth – 32, 38, 59, 88, 89
Van Arsdell, Glen S. – 30, 94
Van Haren, Robert M. – 32
Van Valen, Richard – 27
Vassileva, Christina M. – 48
Vassiliades, Thomas A. – 24
Villavicencio, Mauricio A. – 41
Vinnakota, Anirudh – 35
Vricella, Luca A. – 59, 119

#### w

Wahidi, Momen M. – 25
Wallace, Africa F. – 35
Wang, Hanghang N. – 33
Wee, Jon O. – 60
Wei, Lawrence – 47
Weyant, Michael J. – 31, 46, 78, 92, 95
White, Rodney A. – 59
Whitman, Glenn J. R. – 24, 92, 94
Whitson, Bryan A. – 55, 96, 115
Whyte, Richard I. – 25, 79, 90, 95, 103
Williams, Matthew L. – 44, 86, 115
Wilson, Jennifer L. – 60
Woods, David – 52
Woods, Ronald K. – 27
Wright, Cameron D. – 36, 77, 80, 104

#### Υ

Yamanaka, Katnsuhiro J. – 33 Yang, Bo – 33, 59, 88 Yasufuku, Kazuhiro – 18, 36, 81 Young, Bree Ann – 47

#### Z

Zellinger, Mary – 26 Zhang, Yiliang N. – 41 Zhou, Xun N. – 35 Zorn, George L. – 59 Zwischenberger, Brittany A. – 27

## **Mark Your Calendars**

#### 2018 STS Educational Courses

#### Symposium on Robotic Cardiac Surgery: Mitral Valve Repair, Coronary Bypass, and More

March 23-24, 2018 Chicago, IL

#### STS/ELSO ECMO Management Symposium

July 13-15, 2018 Tampa, FL

#### **Advances in Quality & Outcomes: A Data Managers Meeting**

September 26-28, 2018 Hollywood, CA

#### 15th Annual Multidisciplinary Cardiovascular and Thoracic Critical Care Conference

October 4-6, 2018 Washington, DC

#### **ACS/STS Cardiothoracic Surgery in the Future: Technology Overview for Residents and Medical Students**

October 22, 2018 Boston, MA

#### STS/EACTS Latin America Cardiovascular Surgery Conference

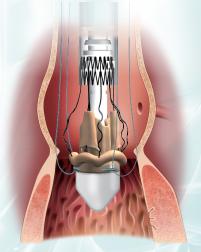
November 15-17, 2018 Cartagena, Colombia

Visit sts.org/meetings for the latest information on STS educational programs.



# **Optimizing Minimally Invasive Cardiac Surgery**

See the difference



- Minimized Incision
- Maximized Visibility
- Eliminates the drawback of long procedure times in MICS

## **PERCEVAL**<sup>™</sup>

Perceval's design was made for Minimally Invasive Cardiac Surgery. It's an innovative, sutureless and collapsible aortic bioprosthesis that allows for shorter procedures and reduced physiologic impact during surgery.<sup>1</sup>

1. Ranucci M et al. J Heart Valve Dis. 2012 Nov; 21(6)732-9





www.livanova.com

Caution: Federal Law (USA) restricts this device to sale by or on the order of a physician. Trademark used herein are owned by or licensed to LivaNova USA, Inc.