

SCOLIOSIS RESEARCH SOCIETY presents

23RD
INTERNATIONAL
MEETING ON
ADVANCED
SPINE
TECHNIQUES

*Sponsored by the
Scoliosis Research Society*



WWW.SRS.ORG

IMAST 2016

**PRELIMINARY
PROGRAM**

IMAST Committee

Ronald A. Lehman, Jr., MD *Chair*
Henry F.H. Halm, MD *Co-Chair*
Christopher I. Shaffrey, MD *Past Chair*
Lawrence L. Haber, MD
Jacob M. Buchowski, MD
Justin S. Smith, MD, PhD
Dean Chou, MD
Meric Enercan, MD
Nicholas D. Fletcher, MD
D. Kojo Hamilton, MD, FAANS
Roger K. Owens, II, MD
Andrew H. Jea, MD
Jeffrey Dean Coe, MD
Yong Hai, MD

JULY 13-16, 2016
WASHINGTON, D.C., USA

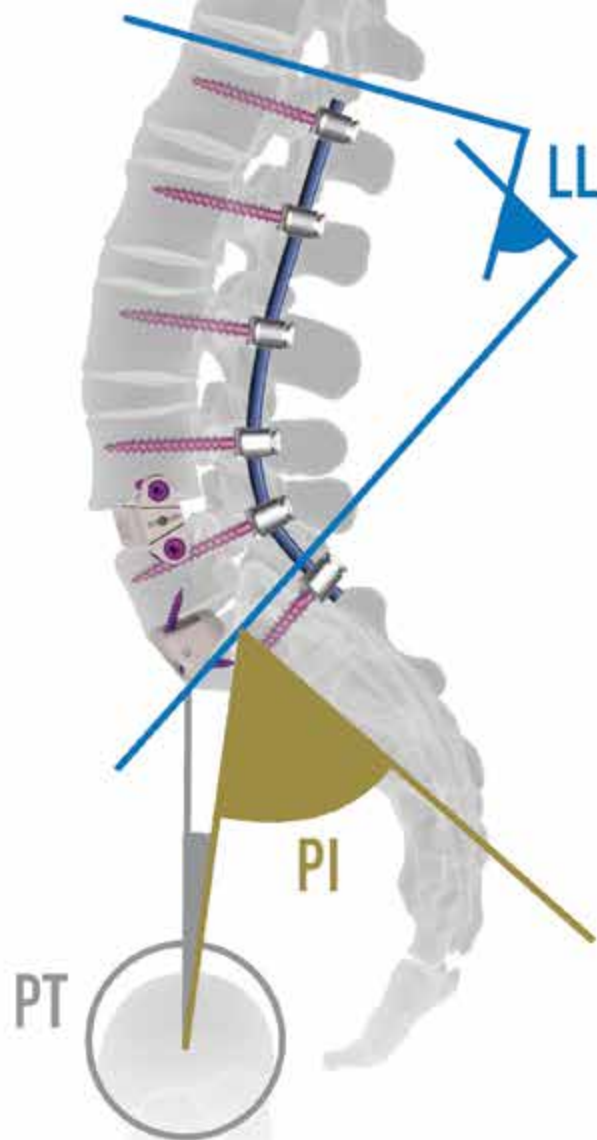
WWW.SRS.ORG/IMAST2016

ALIGNMENT MATTERS.



Integrated Global Alignment (iGA™) is a platform comprised of procedurally based technologies, designed to enhance clinical and economic outcomes by increasing the predictability of achieving global alignment in all spinal procedures. Integration across the surgical workflow allows the surgeon to confidently and reproducibly:

- **Calculate** alignment parameters with preoperative planning tools.
- **Correct** the anterior and posterior column with comprehensive procedural solutions from NuVasive® with the industry's only real-time intraoperative assessment.
- **Confirm** the restoration and preservation of global alignment postoperatively.



RELINÉ

NUVALINE®

XLIF ACR

NUVAMAP®

ALIF ACR

NUVAMAP®
O.R.

BENDINI

NUVASIVE
Speed of Innovation®

TABLE OF CONTENTS

Chair's Message	2
General Meeting Information	3
Location Information	4
Registration Information	5
Housing Information	6
Meeting Overview	7
Scientific Program	8
Exhibits & Hands-On Workshops	14
Social Events & Optional Activities	14
About SRS	15
2015 Award & Research Grant Recipients	16-17
IMAST Registration Forms	19
Delegate Registration Form	19
Guest Registration Form	21
Group Registration Form	23
Join SRS	
2015-2016 Corporate Support	18
Save the Dates	Back Cover

Dates to Remember

Registration Open	February 1, 2016
Housing Open	February 1, 2016
Abstract Submission Deadline	February 1, 2016
Abstract Notification	April 1, 2016 (Annual Meeting – April 15, 2015)
Housing Deadline	June 20, 2016
Advanced Group Registration Deadline	June 1, 2016
Advance Registration Deadline	June 15, 2016

23rd IMAST Venue

Marriott Marquis Washington, D.C.
901 Massachusetts Avenue NW
Washington, District of Columbia 20001 USA

Future Educational Events

51st Annual Meeting & Course

September 21-24, 2016 • Prague, Czech Republic

7th Spine Deformity Solutions: A Hands-On Course

October 28-30, 2016 • Hong Kong, China

24th International Meeting on Advanced Spine Techniques

July 12-15, 2017 • Cape Town, South Africa

Worldwide Conferences

Nottingham, England

Regional Course in Conjunction with Britspine
April 6-8, 2016

Nanjing, China

In Conjunction with Chinese SRS
April 8-10, 2016

Moscow, Russia

In Conjunction with the Russian Congress of Spine Surgery
May 27-28, 2016

Bali, Indonesia

In Conjunction with the Indonesian Spine Society
August 10-11, 2016

Santiago, Chile

In Conjunction with the Chilean Spine Society
November 16-17, 2016

Kyoto, Japan

In Conjunction with the Japanese Spine Society
November 17-19, 2016



CHAIR'S MESSAGE

Dear Participant,

I would like to personally invite you to Washington, D.C., for what promises to be an inspiring academic meeting. As a Society we continue to make incredible strides in the field of spinal deformities and are excited to showcase these advancements at the 23rd IMAST with our colleagues from around the world.

To continue providing a world-class meeting with the best educational value and at the request of our delegation, we are again offering video-based sessions, after their successful debut in 2015. These sessions include "Surgical Techniques: A Video-Based Session" on Friday from 10:30-11:55. We will also continue to offer Special Symposia sessions on Wednesday, July 13 from 15:00-16:45. The symposia topics will be "Modern Perspectives on Spine Care: Where Is Healthcare Going?" and "Novel Treatment Techniques in Spinal Deformity." After the symposia we encourage delegates to take part in the Hands-On Workshops which will be followed by the Welcome Reception in the exhibit hall.

The program also will include the popular complication and debates series, instruction course lectures (ICLs), roundtable case discussions, and four- and two-minute podium presentations; all led by an international and multidisciplinary faculty. We encourage all delegates to come and experience the interactive and innovative program we have planned.

Along with the exciting program, Washington, D.C. is a must-see city with a magnificent assortment of monuments, museums and attractions. When you have time in your schedule we invite you to take advantage of these opportunities and see what this great city has to offer!

I am honored to serve as your IMAST Chairman this year. I want to thank those whose leadership and diligent efforts have created such a successful meeting, including; John P. Dormans, MD; David W. Polly, Jr., MD; Kenneth M.C. Cheung, MD; Todd J. Albert, MD, Henry F.H. Halm, MD, IMAST Committee Co-Chair and the IMAST Committee members.

With warmest personal regards,



Ronald A. Lehman, Jr., MD
IMAST Committee Chair

GENERAL MEETING INFORMATION

Meeting Description

IMAST gathers leading spine surgeons, innovative researchers, and the most advanced spine technologies for all areas of spine (cervical, thoracic and lumbar), most spinal conditions (degenerative, trauma, deformity and tumor), and a variety of treatment techniques. The IMAST program will include didactic presentations, panel discussions, papers and posters on current research, roundtable case discussions, debates, complication series and instructional course lectures, all led by an international and multidisciplinary faculty. IMAST is sponsored by the Scoliosis Research Society (SRS).

Learning Objectives

As a result of participating in this activity, participants should be able to:

- Assess recent advances in surgical techniques for the treatment of spinal disorders, compare them with traditional and regional treatments and determine if and/or when to use them for optimal patient care.
- Analyze indications and potential complications for various procedures and approaches related to spinal surgery and apply that analysis to treatment decisions.
- Present a variety of new objective cost and outcome analyses.
- Formulate a pre-operative plan and analyze its results.
- Identify how attention to safety issues facilitates risk-stratification.

Target Audience

Spine surgeons (orthopaedic and neurological surgeons), residents, fellows, nurses, nurse practitioners, physician assistants, engineers and company personnel.

Accreditation Statement

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

Credit Designation

The Scoliosis Research Society (SRS) designates this live activity for a maximum of 16.5 *AMA PRA Category 1 Credit(s)*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Disclosure of Conflict of Interest

It is the policy of SRS to insure balance, independence, objectivity and scientific rigor in all of their educational activities. In accordance with this policy, SRS identifies conflicts of interest with instructors, content managers and other individuals who are in a position to control the content of an activity. Conflicts are resolved by SRS to ensure that all scientific research referred to, reported, or used in a Continuing Medical Education (CME) activity conforms to the generally accepted standards of experimental design, data collection and analysis.

FDA Statement (United States)

Some drugs and medical devices demonstrated during this course have limited FDA labeling and marketing clearance. It is the responsibility of the physician to be aware of drug or device FDA labeling and marketing status.

Insurance/Liabilities and Disclaimer

SRS will not be held liable for personal injuries or for loss or damage to property incurred by participants or guests at IMAST including those participating in tours and social events. Participants and guests are encouraged to take out insurance to cover loss incurred in the event of cancellation, medical expenses or damage to or loss of personal effects when traveling outside of their own countries. SRS cannot be held liable for any hindrance or disruption of IMAST proceedings arising from natural, political, social or economic events or other unforeseen incidents beyond its control. Registration of a participant or guest implies acceptance of this condition. The materials presented at this Continuing Medical Education (CME) activity are made available for educational purposes only. The material is not intended to represent the only, nor necessarily best, methods or procedures appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement or opinion of the faculty that may be helpful to others who face similar situations. SRS disclaims any and all liability for injury or other damages resulting to any individual attending a scientific meeting and for all claims that may arise out of the use of techniques demonstrated therein by such individuals, whether these claims shall be asserted by a physician or any other person.

Language

Presentations and course materials will be provided in English.

No Smoking Policy

Smoking is not permitted during any IMAST activity or event.

Attire

Business casual (polo or dress shirts, sport coats) are appropriate for IMAST sessions. Business casual attire is recommended for the Course Reception.



LOCATION INFORMATION

About Washington, D.C.

Washington, District of Columbia is the capital of the United States. Founded in 1791 and named in honor of George Washington, the first President of the United States, it has a population of 601,723.

One of the world's most talked about destinations, with nearly 18 million visitors a year, including over 1 million international visitors. Washington, D.C. is a must-see city with a magnificent assortment of National monuments, museums and attractions.

Visa Requirements

Generally, a citizen of a foreign country who wishes to enter the United States must first obtain a visitor visa unless they qualify for entry under the visa waiver program. Visitor visas are nonimmigrant visas for persons who want to enter the United States temporarily for business (visa category B-1), tourism, pleasure or visiting (visa category B-2), or a combination of both purposes (B-1/B-2).

For more information, a list of countries in the visa waiver program, and examples of activities permitted with a visitor visa visit <http://travel.state.gov/content/travel/en.html>.

Washington, D.C. Area Airports

The Ronald Reagan National Airport is the closest airport to the meeting venue and headquarter hotel, the Marriott Marquis Washington, D.C.

- Ronald Reagan National Airport (DCA): 5 miles from meeting venue
 - 391 daily nonstop flights to 78 domestic destinations

Other area airports include:

- Washington Dulles International Airport (IAD): 24 miles from meeting venue
 - 317 daily nonstop flights to 83 domestic destinations
 - 415 weekly departures to 49 international destinations
- Baltimore/Washington International Thurgood Marshall Airport (BWI): 35 miles from meeting venue
 - 632 domestic flights and 18 nonstop international flights daily
 - Non-stop flights to 66 domestic and 10 international destinations

Climate

Average July temperatures in Washington, D.C., range from 89°F (31°C) to 71°F (21°C).

Time Zone

Washington, D.C. is in EDT - Eastern Daylight Time, which is five (5) hour behind of Greenwich Mean Time, four (4) hours during daylight savings.

Currency & Tipping Etiquette

The unit of currency is United States Dollars, indicated as 'USD'. Visit www.xe.com for the latest exchange rates.

It is customary to tip between 15-20 percent depending on the quality of the service.

Electricity

The United States operates on 120 volts, compared to the standard 220 volts in Europe.

REGISTRATION INFORMATION

Dates to Remember

Registration Open	February 1, 2016
Advance Group Registration Deadline	June 1, 2016
Advance Registration Deadline	June 15, 2016

Base Registration Fees	Advance Registration On or Before June 15, 2016	One-Day Registration July 13 or 16	One-Day Registration July 14 or 15	Onsite Registration July 13-16
SRS Fellows – Physician	\$850 USD	\$250 USD	\$500 USD	\$950 USD
SRS Fellows – Non-Physician	\$400 USD	\$250 USD	\$500 USD	\$500 USD
SRS Emeritus Fellows	\$400 USD	\$250 USD	\$500 USD	\$500 USD
Resident/Fellow/Medical Student	\$400 USD	\$250 USD	\$500 USD	\$500 USD
Non-Member Physician	\$1,050 USD	\$250 USD	\$500 USD	\$1,150 USD
Non-Member Non-Physician	\$500 USD	\$250 USD	\$500 USD	\$600 USD
Industry Representative	\$1,100 USD	\$250 USD	\$500 USD	\$1,200 USD
Delegates from Reduced Rate Countries**	\$350 USD	\$250 USD	\$500 USD	\$450 USD
Guest	\$0	\$0	\$0	\$0

* The delegate base registration fee includes entrance to the general and concurrent sessions, special symposia, instructional course lectures, roundtable discussions, complication series, debates, lunch with the experts, the IMAST exhibit hall, breakfasts, breaks, lunches and the Welcome Reception on Wednesday, July 13.

** For information on countries that qualify for reduced rate registration, please visit the SRS website at www.srs.org/imast2016/registration.

Registration Procedure

Online registration for the 23rd IMAST is encouraged. However, delegates and guests may also register by completing and mailing or faxing the Registration Form at the back of this program. All registrations will be confirmed via email. If you do not receive a confirmation within two weeks of submission, please contact SRS at +1-414-289-9107, or meetings@srs.org.

The advance registration deadline is June 15, 2016. After this date, registrations will only be accepted onsite. No exceptions will be made.

What's Included?

The delegate base registration fee includes entrance to the general and concurrent sessions, instructional course lectures, complication series, roundtable and case discussions, debates, lunch with the experts, the IMAST exhibit hall, breakfasts, breaks, lunches, and the Welcome Reception and Special Symposia on Wednesday, July 13. An additional \$25 charge applies for each ticket to the Course Reception on Friday, July 15.

Guest Attendance *(Does not include session admittance.)*

Guests must complete and submit a separate Registration Form. Guest registration gives individuals the ability to register for the Welcome Reception on Wednesday, July 13 for \$20 and the Course Reception on Friday, July 15 for an additional \$30. For a list of tour ideas and D.C. area attractions, please click on the "Tour" tab on the IMAST website (www.srs.org/imast2016/tours). **Entrance to the scientific sessions is not included in guest registration fees.** Only guests registered as Non-Member Non-Physicians will be allowed to participate in the scientific sessions and breaks. Sorry, no exceptions will be made.

Guest Attendance *(Includes session admittance.)*

Guests wishing to attend the Scientific Program should register as Non-Member Non-Physicians by filling out a separate Registration Form. Guests that register as a Non-Member Non-Physician will receive entrance to the general and concurrent sessions, instructional course lectures, roundtable and case discussions, complication series, debates, the IMAST exhibit hall, breakfasts, breaks, lunches, and the Welcome Reception on Wednesday, July 13. An additional \$25 charge applies for each ticket to the Course Reception on Friday, July 15.

Exhibitors

Exhibitor registration instructions will be mailed to exhibiting companies with the booth assignments in February 2016.

Substitutions

Name substitutions must be made to SRS in writing prior to June 15, 2016. Any name substitutions made after June 15, including onsite will result in a \$100 processing fee. If the original registrant shows up at the meeting, he/she will be responsible for a new onsite registration fee.

Cancellations & Refunds

All cancellations must be received in writing. Delegates may fax their cancellation to (414) 276-3349 or email it to meetings@srs.org. Delegates will receive a confirmation and refund within 14 days of receipt of their cancellation notice. SRS will grant a full refund, less a 10% processing fee, for cancellations received in writing on or before July 1, 2016. No refunds will be granted after July 1, 2016.

Invitation Letters

Invitations letters for visa requests are available for registered delegates by contacting meetings@srs.org.



HOUSING INFORMATION

A block of rooms is being held courtesy of the Scoliosis Research Society for the 23rd IMAST at the headquarters hotel.

SRS will not make hotel reservations. All reservations, cancellations and changes to reservations should be made directly with the hotel. All cancellation and refund policies are at the discretion of the hotel.

Housing is currently open!

Marriott Marquis Washington D.C.

901 Massachusetts Avenue NW

Washington District of Columbia 20001 USA

+1 202 824 9200

Reservations- <http://www.srs.org/imast2016/housing>

Reservation Deadline- June 20, 2016

Room Rates:

Single: \$219.00

Double: \$219.00

Triple: \$229.00

Quad: \$239.00

Additional Person: \$20.00

Hotel room rates are subject to applicable state and local taxes in effect at the time of check-out.

The group room rate will be applicable three (3) days prior and three (3) days post the meeting dates.



MEETING OVERVIEW

Subject to change

	Tuesday, July 12	Wednesday, July 13	Thursday, July 14	Friday, July 15	Saturday, July 16
Morning	8:00 – 17:00 Exhibit Setup	8:00 – 12:00 Exhibit Setup/ Exhibitor Registration Open Board of Directors Meeting	*7:30 – 8:30 Hands-On Workshops with Breakfast 7:30 – 18:15 Delegate Registration Open 8:15 – 8:45 Breakfast & Exhibit Viewing 8:45 – 10:15 General Session: Whitecloud Clinical Award Nominees & Presidential Address 10:15 – 11:00 Refreshment Break & Exhibit Viewing 11:00 – 12:15 Concurrent Abstract Sessions & Debate Session 12:15 – 12:30 Walking Break	*7:30 – 8:30 Hands-On Workshops with Breakfast 7:30 – 18:00 Delegate Registration Open 8:00 – 8:40 Breakfast & Exhibit Viewing 8:40 – 9:40 Concurrent Abstract Sessions & Debate Session 9:40 – 10:30 Refreshment Break & Exhibit Viewing 10:30 – 11:55 Concurrent Abstract Sessions & Complications Series 11:55 – 12:05 Walking Break	8:15 – 12:30 Delegate Registration Open 8:15 – 8:45 Breakfast/Exhibits Closed 8:45 – 9:45 Concurrent ICLs 9:45 – 10:00 Refreshment Break 10:00 – 11:00 Concurrent Debate Sessions & Two-Minute Point Presentations 11:00 – 11:30 Walking Break & Lunch Buffet
Afternoon		12:00 – 14:00 Exhibit Setup Board of Directors Meeting 14:00 – 21:00 Delegate Registration Opens 15:00 – 16:45 Symposia A Symposia B 16:45 – 17:00 Walking Break	*12:30 – 13:30 Lunch Exhibit Viewing Hands-On Workshops 13:45 – 14:45 Concurrent ICLs & Two-Minute Point Presentations 14:45 – 15:00 Walking Break 15:00 – 15:55 Concurrent Abstract Sessions/ Complications Series & Point Presentations 15:55 – 16:15 Refreshment Break & Exhibit Viewing 16:15 – 17:15 Concurrent Roundtable & Abstract Sessions 17:15 – 17:30 Walking Break	*12:05 – 13:05 Lunch Exhibit Viewing Hands-On Workshops 13:15 – 14:15 Concurrent Roundtable Sessions & Two-Minute Point Presentations 14:15 – 14:30 Walking Break & Exhibit Viewing 14:30 – 15:30 Concurrent Abstract Sessions & Debates, ICLs 15:30 – 15:45 Walking Break 15:45 – 16:45 Concurrent ICLs & 2-Minute Point Presentations 16:45 – 17:00 Walking Break	11:30 – 13:00 Lunch with the Experts 13:00 Adjourn
Evening		*17:00 – 19:00 Hands-On Workshops with Beverages & Snacks *19:00 – 21:00 Welcome Reception in Exhibit Hall	*17:30 – 18:30 Hands-On Workshops with Beverages & Snacks Free Evening	*17:00 – 18:00 Hands-On Workshops with Beverages & Snacks *19:00 – 22:00 Course Reception	

*Denotes non-CME session



SCIENTIFIC PROGRAM

Topics and faculty are preliminary and subject to change.

Wednesday, July 13, 2016

Registration Open
14:00-21:00

Concurrent Sessions 1A-B: Special Symposia
15:00-16:45

1A. Modern Perspectives on Spine Care: Where Is Healthcare Going?

Moderators: Steven D. Glassman, MD & David W. Polly, Jr., MD

SAVES System in a European Population, Lessons for the World
Benny T. Dahl, MD, PhD, DMSci

Societal Perspectives on Elderly Spine Problems. When to Say "No"
Marinus De Kleuver, MD, PhD

JetBlue, Walmart and Lowes; Why Are Large Multinational Companies Choosing Centers of Excellence in Spine Care?
Rajiv K. Sethi, MD

How to Build a "Center of Excellence" Around Quality and Risk Stratification
Stephen L. Ondra, MD

What is the State of Regulatory Policies in the United States Food and Drug Administration
TBD

1B. Novel Treatment Techniques in Spinal Deformity

Moderators: Neel Anand, MD & Dean M. Chou, MD

Spinal Deformity and MIS: When it Can Be Used, What Are the Limits of MIS Deformity Surgery and When to Go Open
Praveen V. Mummaneni, MD

Anterior Column Realignment: How Much Lordosis Can Realistically Be Achieved and How Much Risk Is There to Anterior Vascularity?
Juan S. Uribe, MD

The Ante-psoas Approach for Spinal Deformities
Ronald A. Lehman, Jr., MD

Robotic Surgery Compared with Navigation
S. Samuel Bederman, MD, PhD, FRCSC & Isador H. Lieberman, MD, MBA, FRCSC

Case Presentations with Panel Discussion
Panelists: Ronald A. Lehman, Jr., MD; Praveen V. Mummaneni, MD; Neel Anand, MD; Dean M. Chou, MD; Juan S. Uribe, MD; S. Samuel Bederman, MD, PhD, FRCSC

Walking Break
16:45-17:00

*Hands-On Workshops
17:00-19:00

(See "Exhibits and Hands-On Workshops (HOW) section on page 14 for more information.)

Welcome Reception in the Exhibit Hall
19:00-21:00

Thursday, July 14, 2016

Registration Open
7:30-18:15

*Hands-On Workshops with Breakfast
7:30-8:30

(See "Exhibits and Hands-On Workshops (HOW) section on page 14 for more information.)

Exhibits Open
8:15-17:30

Exhibit Viewing & Breakfast
8:15-8:45

General Session
8:45-10:15

Welcome Address

*Ronald A. Lehman, Jr., MD
IMAST Committee Chair*

Whitecloud Clinical Award Nominees

More information on podium presentations will be posted to the SRS website prior to the meeting.

Introduction of the President

Kenneth M.C. Cheung, MD

Keynote Address

*David W. Polly, Jr., MD
Scoliosis Research Society (SRS) President*

Preview of the 51st Annual Meeting and 24th IMAST
Annual Meeting – Prague, Czech Republic
IMAST – Cape Town, South Africa

Refreshment Break & Exhibit Viewing
10:15-11:00

Concurrent Sessions 2A-C: Abstract Sessions and Debate Series
11:00-12:15

2A. Whitecloud Basic Science Nominees and Top-Scoring Abstracts

More information on podium presentations will be posted to the SRS website prior to the meeting.

2B. Early Onset Scoliosis Abstracts

More information on podium presentations will be posted to the SRS website prior to the meeting.

**Denotes Non-CME Session*

SCIENTIFIC PROGRAM

Topics and faculty are preliminary and subject to change.

Thursday, July 14, 2016

2C: Debate Series 1

Moderator: Frank J. Schwab, MD & Mark Weidenbaum, MD

Debate 1: Adult Degenerative Scoliosis: Selecting the Optimal UIV

Position 1: Munish C. Gupta, MD

Position 2: David W. Polly, Jr., MD

Debate 2: Never Decompress Next to a Fused Level!

Pro: Jeffery C. Wang, MD

Con: Benny T. Dahl, MD, PhD, DMSci

Walking Break

12:15-12:30

Exhibit Viewing & Lunch

12:30-1:30

*Hands-On Workshops with Lunch

(See "Exhibits and Hands-On Workshops (HOW)" section on page 14 for more information.)

Walking Break

13:30-13:45

Concurrent Sessions 3A-D: Instructional Course Lectures and Two-Minute Point Presentations

13:45-14:45

3A: Adult Deformity: Clinical and Radiographic Evaluation

Moderators: Ian J. Harding, BA, FRCS (Orth) & Christopher I. Shaffrey, MD

When to Say "When" in Adult Spinal Deformity

Steven D. Glassman, MD

How Do I Approach Adult Degenerative Scoliosis?

Tyler Koski, MD

In What Cases Can I Obtain Correction Without Performing Osteotomies?

Thomas J. Errico, MD

Osteotomy Planning: What Factors Force My Hand in Performing Osteotomies?

Lawrence G. Lenke, MD

3B: Management of Primary Spine Tumors

Moderators: Laurence D. Rhines, MD & Michael J. Yaszemski, MD, PhD

Evaluation and Treatment Decisions in Metastatic Spine Disease

Benny T. Dahl, MD, PhD, DMSci

Surgical Techniques and Outcomes in Metastatic Spine Disease

Daniel M. Sciubba, MD

Role of Radiotherapy and Ablation in Metastatic Spine Disease

Dean M. Chou, MD

Evaluation and Treatment of Primary Spine Tumors

Peter S. Rose, MD

3C: AIS: Clinical and Radiographic Evaluation

Moderators: Peter O. Newton, MD & Harry L. Shufflebarger, MD

Role of Tethering for the Treatment of AIS

Amer F. Samdani, MD

Where, When and How Do We Brace Patients with AIS

Stefan Parent, MD, PhD

When Should a 3C Undergo a Selective Thoracic Fusion?

John B. Emans, MD

What Is on the Horizon for AIS

Jahangir K. Asghar, MD

3D: Two-Minute Point Presentations

More information on podium presentations will be posted to the SRS website prior to the meeting.

Walking Break

14:45-15:00

Concurrent Sessions 4A-D: Concurrent Abstract Session, Complication Series and Two-Minute Point Presentations

15:00-15:55

4A: Adolescent Idiopathic Scoliosis Abstracts

More information on podium presentations will be posted to the SRS website prior to the meeting.

4B: Complication & Infection Abstracts

More information on podium presentations will be posted to the SRS website prior to the meeting.

4C: My Worst Complication Series: Strategies to Prevent/Manage

Moderators: Sigurd H. Berven, MD & Yan Wang, MD

Complication 1: Adult Deformity

Tyler Koski, MD

Complication 2: Cervical Trauma

Steven C. Ludwig, MD

Complication 3: Tumor

Peter S. Rose, MD

4D: Two-Minute Point Presentations

More information on podium presentations will be posted to the SRS website prior to the meeting.

Refreshment Break & Exhibit Viewing

15:55-16:15

*Denotes Non-CME Session



SCIENTIFIC PROGRAM

Topics and faculty are preliminary and subject to change.

Thursday, July 14, 2016

Concurrent Sessions 5A-D: Abstract Session and Roundtable Sessions

16:15-17:15

5A: Cervical Spine Trauma

Moderators: Todd J. Albert, MD & Michael G. Fehlings, MD, PhD, FRCSC, FACS

Case Presenters:

Steven C. Ludwig, MD

James S. Harrop, MD

Marcel F. Dvorak, MD, FRCSC

Vincent C. Traynelis, MD

5B: Adolescent Idiopathic Scoliosis

Moderators: John P. Dormans, MD & B. Stephens Richards, III, MD

Case Presenters:

Daniel J. Sucato, MD, MS

Stefan Parent, MD, PhD

Firoz Miyanji, MD, FRCSC

Thomas J. Errico, MD

5C: Adult Degenerative Scoliosis

Moderators: Christopher P. Ames, MD & Henry F. H. Halm, MD

Case Presenters:

Sebastien Charosky, MD

Khaled Kebaish, MD

Serena S. Hu, MD

Justin S. Smith, MD, PhD

5D: Innovative & Diagnostic Methods Abstracts

More information on podium presentations will be posted to the SRS website prior to the meeting.

Walking Break

17:15-17:30

*Afternoon Hands-On Workshops with Beverages and Snacks

17:30-18:30

(See "Exhibits and Hands-On Workshops (HOW)" section on page 14 for more information.)

Friday, July 15, 2016

Registration Open

7:30-18:00

*Hands-On Workshops with Breakfast

7:30-8:30

(See "Exhibits and Hands-On Workshops (HOW)" section on page 14 for more information.)

Exhibits Open

8:00-17:00

Exhibit Viewing & Breakfast

8:00-8:40

Concurrent Sessions 6A-C: Abstract Sessions and Debate Series

8:40-9:40

6A: Adult Deformity Abstracts

More information on podium presentations will be posted to the SRS website prior to the meeting.

6B: Trauma & Tumor Abstracts

More information on podium presentations will be posted to the SRS website prior to the meeting.

6C: Debate Series 2

Moderators: Ronald A. Lehman, Jr., MD & Praveen V. Mummaneni, MD

Debate 1: MIS Approaches Adult Degenerative Lumbar Scoliosis via Lateral/Oblique Approach Are Best

LLIF/OLIF: Juan S. Uribe, MD

OPEN: Henry F.H. Halm, MD, PhD

Debate 2: Reduction of High Grade Spondylolisthesis Is Always Required

Pro: John R. Dimar, II, MD

Con: Hubert Labelle, MD

Refreshment Break & Exhibit Viewing

9:40-10:30

Concurrent Sessions 7A-C: Abstract Sessions and Video-Based Session

10:30-11:55

7A: Cervical Spine Abstracts

More information on podium presentations will be posted to the SRS website prior to the meeting.

7B: Lumbar Degenerative & Spondylolisthesis Abstracts

More information on podium presentations will be posted to the SRS website prior to the meeting.

**Denotes Non-CME Session*

SCIENTIFIC PROGRAM

Topics and faculty are preliminary and subject to change.

Friday, July 15, 2016

7C: Surgical Techniques: A Video-Based Session

Moderators: Sigurd H. Berven, MD & Christopher I. Shaffrey, MD

Pedicle Subtraction Osteotomy

Christopher P. Ames, MD

Deformity TLIF

Lawrence G. Lenke, MD

Anterior Surgery of Lumbar Scoliosis

Henry F.H. Halm, MD

Implant Based Correction Maneuvers to Restore Sagittal Balance

Stephen J. Lewis, MD, MSc, FRCSC

Walking Break

11:55-12:05

Exhibit Viewing & Lunch

12:05-13:05

*Hands-On Workshops with Lunch

(See "Exhibits and Hands-On Workshops (HOW)" section on page 14 for more information.)

Walking Break

13:05-13:15

Concurrent Sessions 8A-E: Roundtable Sessions and Two-Minute Point Presentations

13:15-14:15

8A: MIS Deformity Correction (Adult and Pediatric)

Moderators: Richard G. Fessler, MD, PhD & Juan S. Uribe, MD

Case Presenters

Mun Keong Kwan, MBBS, MS(Orth)

Praveen V. Mummaneni, MD

Michael Y. Wang, MD, FACS

Suken A. Shah, MD

8B: PJK Considerations

Moderators: David W. Polly, Jr., MD & Frank J. Schwab, MD

Case Presenters:

Benny T. Dahl, MD, PhD, DMSci

Serena S. Hu, MD

Justin S. Smith, MD, PhD

John C. France, MD

8C: Cervical Degenerative Disease and CSM

Moderators: Michael G. Fehlings, MD, PhD, FRCS, FACS & James S. Harrop, MD

Case Presenters:

Vincent C. Traynelis, MD

Alan S. Hilibrand, MD

Jeffery C. Wang, MD

Rick C. Sasso, MD

8D: Thoracolumbar Trauma

Moderators: Robert N. Dunn, FCS (SH)Orth

Case Presenters:

Steven C. Ludwig, MD

Michael Rosner, MD

Marcel F. Dvorak, MD, FRCSC

Paul A. Anderson, MD

8E: Two-Minute Point Presentations

More information on podium presentations will be posted to the SRS website prior to the meeting.

Walking Break & Exhibit Viewing

14:15-14:30

Concurrent Sessions 9A-D: Abstract Session, Debate Series and Instructional Course Lectures

14:30-15:30

9A: Kyphosis, Congenital & Neuromuscular Deformity Abstracts

More information on podium presentations will be posted to the SRS website prior to the meeting.

9B: Debate Series 3

Moderators: Todd J. Albert, MD & Michael Fehlings, MD, PhD, FRCS, FACS

Debate 1: Cervical Deformity Correction Approach: Which Is Better?

A/P: James S. Harrop, MD

Posterior: Vincent C. Traynelis, MD

Debate 2: What Is the Optimal Approach for Single Level Radiculopathy/CSM?

Arthroplasty: Rick C. Sasso, MD

Anterior Discectomy and Fusion: Jeffery C. Wang, MD

Laminoplasty: Kuniyoshi Abumi, MD

9C: What Is New in Pediatric Deformity

Moderators: Kenneth M.C. Cheung, MD & John P. Dormans, MD

Brace Compliance and Efficacy: What Role Do Compliance Meters, Education and Counseling Provide?

Lori A. Karol, MD

How Do We Use Spine Growth Data to Effectively Treat Early Onset Scoliosis?

James O. Sanders, MD

When to Fuse to the Pelvis in the Ambulatory Patient

Paul D. Sponseller, MD, MBA

Emerging Technologies: Growing Constructs and Beyond

Suken A. Shah, MD

*Denotes Non-CME Session



SCIENTIFIC PROGRAM

Topics and faculty are preliminary and subject to change.

Friday, July 15, 2016

9D: International Spine ICL

Moderators: Marinus De Kleuver, MD, PhD & Henry F.H. Halm, MD

Differing Approaches for Adult Spinal Deformity

Daniel H. Chopin, MD

Are There Differences in Complication Rates for ASD Around the Globe?

Oheneba Boachie-Adjei, MD

Providing Safe and High Quality Surgical Care for ASD: How Can it Be Done Cost Effectively?

S. Rajasekaran, MD, FRCS, MCh, PhD

Taking Care of ASD Patients When Resource Allocation is Challenging: Is This the Future for all Surgeons?

Sean Molloy, MBBS, FRCS(Orth), MSc

Walking Break

15:30-15:45

Concurrent 10A-E: Instructional Course Lectures and Two-Minute Point Presentations

15:45-16:45

10A: Pediatric Deformity: Common Challenges in Treatment and Correction

Moderators: B. Stephens Richards, III, MD & Daniel J. Sucato, MD, MS

How Does 3D Understanding Aid in Classifying AIS?

Carl-Eric Aubin, PhD, P.Eng

What Are the Most Reproducible Steps to Achieve Derotation and Deformity Correction?

Peter O. Newton, MD

Can We Really Save Levels With Anterior Surgery?

Henry F.H. Halm, MD

When Can the Rules of Level Selection Be Violated?

Kenneth M.C. Cheung, MD

10B: Adult Deformity II: Goals and Complication Avoidance

Moderators: Christopher J. DeWald, MD & Christopher L. Hamill, MD

Defining the Goals in Approaching the Deformity?

Ian J. Harding, BA, FRCS (Orth)

How to Ensure the Patient Will Tolerate a Major Operation: Considerations and Red Flags

Christopher I. Shaffrey, MD

Perioperative Complications: Recognition and Solutions

Sigurd H. Berven, MD

How do We Assess and Optimize Patient Outcomes Following Complex Reconstructions?

Hee-Kit Wong, MD

10C: Safety ICL

Moderator: Lawrence G. Lenke, MD & Michael G. Vitale, MD, MPH

The Seattle Spine Team Approach: Applying Principles of LEAN and the Toyota Production System to Spine Surgery.

Rajiv K. Sethi, MD

Quality 101: PDCA, RCA, Six Sigma, and LEAN - What Is all This and How Can it Be Applied to Spine Care?

James O. Sanders, MD

Complex Spinal Deformity: How to Choose the Safest Operative Approach Both Pre-op and Intra-op, Including Staging When Appropriate

David L. Skaggs, MD, MMM

Debate: Staggered or Simultaneous Spine Surgery

Never Stage: Serena S. Hu, MD

Always Stage: Praveen V. Mummaneni, MD

10D: Management of Junctional Failures

Moderators: John R. Dimar, II, MD & Michael Rosner, MD

Etiology and Treatment of Proximal Junctional Failures

Charles G. Fisher, MD, MHSc

What Can Be Done to Prevent Proximal Junctional Failures

Morio Matsumoto, MD

LIV Selection in Long Adult Deformity Constructs: When Can One Reliably Stop Short of the Sacrum?

Yon Qiu, MD

When to Do VCR for PJK in Upper Thoracic Spine vs Extension into Cervical Spine

Ronald A. Lehman, Jr., MD

10E: Two-Minute Point Presentations

More information on podium presentations will be posted to the SRS website prior to the meeting.

Walking Break

16:45-17:00

*Afternoon Hands-On Workshops with Beverages and Snacks

17:00-18:00

(See "Exhibits and Hands-On Workshops (HOW) section on page 14 for more information.)

*Course Reception

19:00-22:00

**Denotes Non-CME Session*

SCIENTIFIC PROGRAM

Topics and faculty are preliminary and subject to change.

Saturday, July 16, 2016

Registration Open

8:15-12:30

Breakfast/ Exhibits Closed

8:15-8:45

Concurrent Sessions 11A-C: Instructional Course Lectures

8:45-9:45

11A: Management of Degenerative Cervical Myelopathy AOSpine and CSRS Guidelines: AOSpine North America and AOSpine International Special Symposia

Moderator: Michael G. Fehlings, MD, PhD, FRCSC, FRAS & Rick C. Sasso, MD

Introduction and Presentation of Two Cases: Mild Cervical Myelopathy and Cervical Stenosis with Cord Compression but no Myelopathy

Michael G. Fehlings, MD, PhD, FRCSC, FRAS

Management of Cervical Cord Compression Without Cord Compression and Mild Degenerative Cervical Myelopathy

Brian K. Kwon, MD, PhD, FRCSC

Management of Moderate and Severe Degenerative Cervical Myelopathy

Jeffery C. Wang, MD

Review of Methodology for Systematic Reviews and Guidelines

Lindsay Tetreault, BSc

Panel Discussion and Case Presentations

11B: What Is New In Lumbar Degenerative Surgery

Moderators: Jacob M. Buchowski, MD, MS & Jeffery D. Coe, MD

Biomaterials for Interbody Cages

Ivan Cheng, MD

Expandable Interbody Cages

Jeffery D. Coe, MD

Cortical Screw Fixation

Mladen Djurasovic, MD

Spinal Alignment in Lumbar Degenerative Fusion

Jacob M. Buchowski, MD, MS

11C: Emerging Technologies in Spine Surgery

Moderators: Neel Anand, MD & Ian J. Harding, BA, FRCS (Orth)

MIS Tumor Surgery: What is the Current State of the Art?

Laurence D. Rhines, MD

Posterior Sagittal Realignment From a Posterior-Only Route Without Major Osteotomies

Ronald A. Lehman, Jr., MD

Intra-op Factors That Help Limit Blood Loss During Major Spinal Reconstructions

Justin S. Smith, MD, PhD

Intra-op Navigation: Where We Are Now and Where We Are Headed?

David W. Polly, Jr., MD

Walking Break

9:45-10:00

Concurrent Sessions 12: Debate Series

10:00-11:00

12: Debate Series 4

Moderators: Ahmet Alanay, MD & J. Abbott Byrd, III, MD

Debate 1: LLIF is Superior to TLIF for Adult Degenerative Lumbar

Pro: Praveen V. Mummaneni, MD

Con: Tyler Koski, MD

Debate 2: TLIF is always needed for Degenerative Spondy Instrumented Fusions

Pro: Manabu Ito, MD PhD

Con: Jeffery A. Goldstein, MD

Debate 3: Biologics are a Must for Long Adult Deformity Surgeries

Pro: Steven D. Glassman, MD

Con: Saumyajit Basu, MD

Walking Break & Lunch Buffet

11:00-11:30

Session 13: Lunch with the Experts: Top Pearls and Pitfalls I Have Learned in My Career

11:30-13:00

Moderators: Kamal N. Ibrahim, MD, FRCS(c), MA & Ronald A. Lehman, Jr., MD

Christopher I. Shaffrey, MD

Oheneba Boachie-Adjei, MD

Harry L. Shufflebarger, MD

David W. Polly, Jr., MD

John P. Kostuik, MD

Adjourn

13:00

**Denotes Non-CME Session*



PRELIMINARY PROGRAM

13

EXHIBITS & HANDS-ON WORKSHOPS

Exhibiting and demonstrating companies are subject to change.

Exhibits

SRS encourages IMAST delegates to visit the IMAST Exhibit Hall during exhibit viewing times and between sessions. The following companies will be represented in the IMAST 2016 Exhibit Hall (as of February 2016)

Alphatec Spine	Medtronic
Benvenue Medical	Misonix
DePuy Synthes Spine	NuVasive
Diers Medical	Orthofix
EOS Imaging	OrthoPediatrics
Globus Medical	Paradigm Spine
K2M	SpineGuard
LDR Spine	Stryker Spine
Mazor Robotics	Zimmer Biomet
Medicrea USA	

Hands-On Workshops (as of February 2016)

IMAST delegates are encouraged to attend the Hands-On Workshops (HOW) on Wednesday, Thursday and Friday afternoons, at lunch on Thursday and Friday and during breakfast on Thursday and Friday mornings. Each workshop is programmed by a single supporting company and will feature presentations on topics and technologies selected by the company (as of February 2016). *Please note: CME credits are not available for Hands-On Workshops.

	Wednesday, July 13, 2016	Thursday, July 14, 2016	Friday, July 15, 2016
Morning		7:30-8:30 Medtronic	7:30-8:30 Medtronic EOS Imaging
Lunch		12:15-13:15 K2M Globus NuVasive ZimmerBiomet	11:55-12:55 K2M DePuy ZimmerBiomet Orthofix
Afternoon	17:00-19:00 K2M NuVasive	17:15-18:15 K2M DePuy	17:00-18:00

SOCIAL EVENTS & OPTIONAL ACTIVITIES

Welcome Reception

All registered delegates and registered guests are invited to pick up their registration materials and to attend the IMAST Welcome Reception on Wednesday, July 13 from 19:00-21:00. The reception will be hosted in the Exhibit Hall in Salon 6 of the Marquis Ballroom on Meeting Level 2 of the Marriott Marquis Washington, D.C., where beverages and light hors d'oeuvres will be served. There is no charge for registered delegates, though a ticket must be requested at the time of registration. Registered guests may purchase a Welcome Reception ticket for \$20 USD at the time of registration. Dress for the Welcome Reception is business casual.

We encourage delegates to take part in the following afternoon activities before the Welcome Reception on Wednesday, July 13.

15:00-16:45

**** Special Symposia****

1. Modern Perspectives on Spine Care: Where Is Healthcare Going?
2. Novel Treatment Techniques in Spine Deformity

17:00-19:00

Hands-On Workshops with Beverages & Snacks

Course Reception

IMAST delegates and registered guests are invited to take part in a closing reception at a unique Washington, D.C. venue on Friday, July 15 from 19:00-22:00. Tickets are \$25 each for registered delegates and \$30 each for registered guests and must be purchased at the time of registration. A limited number of tickets may be available onsite, but organizers strongly encourage delegates to purchase tickets in advance. Business casual dress is appropriate for the Course Reception but please keep in mind portions of the event will be held outside.

Optional Tours

Please visit www.srs.org/imast2016/tours for a list of some of the incredible attractions available for you to visit while in D.C.

Washington, D.C. offers a large number of tours and attractions for little to no cost! These tours and attractions are available to any resident or visitor to D.C. Due to the ease and convenience of tours and attractions, SRS will not be providing any scheduled tours.

When you find you have time in your schedule, be sure to take advantage of these opportunities and see what this great city has to offer!

ABOUT SRS

Founded in 1966, the Scoliosis Research Society is an organization of medical professionals and researchers dedicated to improving care for patients with spinal deformities. Over the years, it has grown from a group of 37 orthopaedic surgeons to an international organization of more than 1,250 health care professionals.

Mission Statement

The purpose of Scoliosis Research Society is to foster the optimal care of all patients with spinal deformities.

Membership

SRS is open to orthopaedic surgeons, neurosurgeons, researchers and allied health professionals who have a practice that focuses on spinal deformity.

Active Fellowship (membership) requires the applicant to have fulfilled a five-year Candidate Fellowship and have a practice that is 20% or more in spinal deformity. Only Active Fellows may vote and hold elected offices within the Society.

Candidate Fellowship (membership) is open to all orthopaedic surgeons, neurosurgeons and to researchers in all geographic locations who are willing to commit to a clinical practice which includes at least 20% spinal deformity. Candidate Fellows stay in that category for five years, during which time they must demonstrate their interest in spinal deformity and in the goals of the Scoliosis Research Society. Candidate Fellows may serve on SRS committees. After five years, those who complete all requirements are eligible to apply for Active Fellowship in the Society. Candidate Fellowship does not include the right to vote or hold office.

Associate Fellowship (membership) is for distinguished members of the medical profession including nurses, physician assistants, as well as orthopaedic surgeons, neurosurgeons, scientists, engineers and specialists who have made a significant contribution to scoliosis or related spinal deformities who do not wish to assume the full responsibilities of Active Fellowship. Associate Fellows may not vote or hold office, but may serve on committees.

See website for membership requirement details

Programs And Activities

SRS is focused primarily on education and research and include the Annual Meeting, the International Meeting on Advanced Spine Techniques (IMAST), Worldwide Conferences, a Global Outreach Program, the Research Education Outreach (REO) Fund which provides grants for spine deformity research, and development of patient education materials.

Website Information

For the latest information on SRS meetings, programs, activities and membership please visit www.srs.org. The SRS Website Committee works to ensure that the website information is accurate, accessible and tailored for target audiences. Site content is varied and frequently uses graphics to stimulate ideas and interest. Content categories include information for medical professionals, patients/public, and SRS members.

For more information and printable membership applications, please visit the SRS website at www.srs.org.

Society Office Staff

Tressa Goulding, CAE, CMP — Executive Director
(tgoulding@srs.org)

Lily Atonio — Education & Program Manager
(latonio@srs.org)

Megan Campbell — Meetings Manager
(mcampbell@srs.org)

Shahree Douglas, MS — Communications & Program Manager
(sdouglas@srs.org)

Arlensiu Garcia Novelli — Membership Manager
(agarcianovelli@srs.org)

Courtney Kissinger — Senior Education Manager
(ckissinger@srs.org)

Ashtin Neuschaefer — Administrative Manager
(aneuschaefer@srs.org)

Ann Shay — Senior Meetings Manager
(ashay@srs.org)

Scoliosis Research Society

555 East Wells Street, Suite 1100
Milwaukee, WI 53202
Phone: 414-289-9107
Fax: 414-276-3349
www.srs.org



2015 AWARD RECIPIENTS

SRS Awards

Lifetime Achievement Awards

Presented to a member who has exhibited long and distinguished service to SRS and to spinal deformity research and care:

Behrooz A. Akbarnia, MD & Randal R. Betz, MD

Walter P. Blount Humanitarian Award

Presented for outstanding service to those with spinal deformity, and for generosity to the profession and Society:

S. Rajasekaran, MD, FRCS, MCh, PhD

IMAST Awards

The Thomas Whitecloud Awards are given to the Best Basic Science and Best Clinical papers presented at IMAST.

Whitecloud Award for Best Basic Science Paper

Paper #15: Generation of FBN1 Gene Knockout Pig Model for Marfan Syndrome
Morio Matsumoto, MD; Kota Watanabe, MD; Keisuke Horiuchi, MD, PhD; Kazuhiro Umeyama, PhD; Hiroshi Nagashima, PhD

Whitecloud Award for Best Clinical Paper

Paper #3: Pre-operative Predictors of Neurological Motor Decline in Complex Adult Spinal Deformity Surgery: Results of the Prospective, International, Multicenter Scolio-RISK-1 Study in 271 Patients

Michael G. Fehlings, MD, PhD, FRCS; Lawrence G. Lenke, MD; Christopher I Shaffrey, MD; Branko Kopjar, MD, PhD, MS; Kenneth MC Cheung, MD; Leah Yacat Carreon, MD, MS; Mark B. Dekutoski, MD; Frank J. Schwab, MD; Oheneba Boachie-Adjei, MD, DSc; Khaled M Kebaish, MD; Christopher P. Ames, MD; Yong Qiu, MD; Yukihiro Matsuyama; Benny T. Dahl, MD, PhD; Hossein Mehdian, MD; Ferran Pellisé, MD; Stephen J. Lewis, MD, FRCS, MS; Sigurd H. Berven, MD

Annual Meeting Awards

Russell A. Hibbs Awards

The Russell A. Hibbs Award for the Best Basic Research Presentation was presented to Paper #35: *Normal Human Spine Growth and Prediction of Final Spine Height Developed from a Longitudinal Cohort of Children Followed Through Their Growth Until Completion* by James O. Sanders, MD; Lauren Karbach, MD; Thomas Osinski, BS; Raymond Liu, MD; Xing Qiu, PhD; Daniel Cooperman, MD

The winner of the Russell A. Hibbs Award for the Best Clinical Research Presentation was awarded to Paper #42: *Influence of Wear Time on Outcome: Results from the Bracing in Adolescent Idiopathic Scoliosis Trial (BrAIST)* by Lori A. Dolan, PhD and Stuart L. Weinstein, MD

John H. Moe Award

The John H. Moe Award is given to the Best Basic Science E-Poster at the Annual Meeting & Course. This year the award was presented to E-Poster #219: *Functional Analysis of the Newly Identified Gene Clarified the Pathomechanism of Adolescent Idiopathic Scoliosis* by Yoji Ogura, MD; Ikuyo Kou, PhD; Yohei Takahashi, MD, PhD; Katsuki Kono, MD; Noriaki Kawakami, MD; Koki Uno; Manabu Ito, MD; Shohei Minami, MD, PhD; Ikuho Yonezawa, MD; Haruhisa Yanagida, MD; Hiroshi Taneichi, MD, PhD; Kota Watanabe, MD; Taichi Tsuji, MD; Teppei Suzuki, MD; Hideki Sudo, MD, PhD; Toshiaki Kotani, MD, PhD; Naobumi Hosogane, MD, PhD; Eijiro Okada; Kazuhiro Chiba, MD, PhD; Yoshiaki Toyama, MD, PhD; Morio Matsumoto, MD; Shiro Ikegawa, MD, PhD

Louis A. Goldstein Award

The Goldstein Award is given to the Best Clinical E-Poster at the Annual Meeting & Course. The winner of the Louis A. Goldstein Award was E-Poster #248: *Spinal Growth in Normal Children Between 3 and 11 Years Old Using 3D Reconstruction: A Longitudinal Study* by Leonie Tremblay; Patrick Tohmé; Marjolaine Roy-Beaudry, MS; Marie Beauséjour, PhD; Hubert Labelle, MD; Stefan Parent, MD, PhD

2015 RESEARCH GRANT RECIPIENTS

The SRS Research Grant Committee would like to congratulate the following 2015 grant recipients:

Title of Project	Primary Investigator/Location	Grant Duration	Type of Grant	Amt. Approved
Induction of Lung Regeneration Following Posterior Spinal Fusion	Brian M. Varisco, MD/Cincinnati, OH, USA	2 years	SRS – Small Exploratory	\$10,000
Structure and Growth of the Thoracolumbar Spine and Ribs in Normative Pediatric and AIS Subjects – A Comprehensive Multi-Center and Multi-Modal Validation Study	Sriram Balasubramanian, PhD/Philadelphia, PA, USA	2 years	SRS – Standard Investigator	\$50,000
Markerless 3D Assessment of Severity and Progression of Scoliosis Using Surface Topography	Samer M. Adeeb, PhD, P. Eng/Edmonton, AB, Canada	2 years	SRS – SpineCraft Standard Investigator	\$30,000
Validation of 3D Ultrasound Measurements with EOS System on Children with AIS	Edmond H. Lou, PhD, P. Eng/Edmonton, AB, Canada	1 year	SRS – Small Exploratory	\$10,000
MidTerm Outcomes on Patients with AIS Following Spinal Fusion	Mark C. Lee, MD/Hartford, CT, USA	2 years	SRS – Biomet Standard Investigator	\$25,000
Investigating Mechanisms of Kyphoscoliosis in Mice Lacking Site-1 Protease in Osteochondroprogenitor Cells	Debrabrata Patra, PhD/St. Louis, MO, USA	2 years	SRS – K2M Standard Investigator	\$50,000
The Effect of Spinopelvic Parameters on the Development of Proximal Junctional Kyphosis in Early Onset Scoliosis	Ron El-Hawary, MD/Halifax, NS, Canada	1 year	SRS – Small Exploratory	\$9,665
The Influence of BMP9 Expression on the Development of Proximal Junctional Kyphosis in Early Onset Scoliosis in a Mouse Model	Michael J. Lee, MD/Seattle, WA, USA	2 years	SRS – NuVasive New Investigator	\$25,000
Biochemical and Mechanical Intervertebral Disc Profiles in Developmental Spinal Deformities	Arin M. Ellingson, PhD/Minneapolis, MN, USA	2 years	SRS – SpineCraft New Investigator	\$25,000
Three Dimensional Effects of Bracing in AIS	Kenny Kwan, MD/Hong Kong	1 year	SRS – Small Exploratory	\$10,000
Prospective Multicenter Validation of Frailty Index, Deformity Surgical Invasiveness Index and Predictive Analytic Models for Preoperatively Predicting Intraoperative and Perioperative Complications, LOS and EBL in ASD Surgery	Christopher P. Ames, MD/San Francisco, CA, USA	2 years	SRS – Standard Investigator	\$25,000



CORPORATE SUPPORT

We are pleased to acknowledge and thank those companies that provided financial support to SRS in 2015.

Support levels are based on total contributions throughout the year and include the Annual Meeting, IMAST, Global Outreach Scholarships, Edgar Dawson Memorial Scholarships, SRS Traveling Fellowships and the Research Education Outreach (REO) Fund.

Double Diamond Level Support

DePuy Synthes Spine
Medtronic

K2M
Nuvasive

Diamond Level Support

Globus Medical
SpineCraft

Orthofix Spine
Zimmer Biomet

Gold Level Support

OrthoPediatrics

SeaSpine

Stryker Spine

Bronze Level Support

Alphatec Spine
BM Korea Ltd
CeraPedics
Ellipse Technologies
EOS Imaging
GS Medical

L&K Biomed
Mazor Robotics
Medicrea International
Misonix
NovaMedika Group
Siemens Healthcare

SpineGuard
Synergic Evolution
Thieme Publishing
Waston Medical Appliance



IMAST 2016 DELEGATE

REGISTRATION
FORM

23RD International Meeting on Advanced Spine Techniques • JULY 13–16, 2016 • WASHINGTON, D.C., USA • MARRIOTT MARQUIS
ADVANCE REGISTRATION DEADLINE: JUNE 15, 2016 (Registrations will ONLY be accepted onsite after this date – no exceptions)

DELEGATE INFORMATION

ONLINE REGISTRATION AVAILABLE AT WWW.SRS.ORG/IMAST2016/REGISTRATION

SRS ID Number	First (Given) Name	Last (Family) Name	Suffix (Jr., III, etc)	Degree (MD, PhD, etc)
Email Address (All correspondence is done by email)			Institution	
Mailing Address				
City	State	Zip/Postal Code	Country (To appear on badge)	
Specialty: Orthopaedic Surgeon Neurosurgeon Other: _____				
Assistant/Company Personnel Email Address: _____				
Dietary Restrictions/Requirements: _____				

Base Registration Fees*	Advance Registration On or Before June 15, 2016	One-Day Registration July 13 <input type="checkbox"/> or 15 <input type="checkbox"/>	One-Day Registration July 14 <input type="checkbox"/> or 16 <input type="checkbox"/>	Onsite Registration July 13-16
SRS Fellows – Physician	<input type="checkbox"/> \$850 USD	<input type="checkbox"/> \$250 USD	<input type="checkbox"/> \$500 USD	\$950 USD
SRS Fellows – Non-Physician	<input type="checkbox"/> \$400 USD	<input type="checkbox"/> \$250 USD	<input type="checkbox"/> \$500 USD	\$500 USD
SRS Emeritus Fellows	<input type="checkbox"/> \$400 USD	<input type="checkbox"/> \$250 USD	<input type="checkbox"/> \$500 USD	\$500 USD
Resident/Fellow/Medical Student	<input type="checkbox"/> \$400 USD	<input type="checkbox"/> \$250 USD	<input type="checkbox"/> \$500 USD	\$500 USD
Non-Member Physician	<input type="checkbox"/> \$1,050 USD	<input type="checkbox"/> \$250 USD	<input type="checkbox"/> \$500 USD	\$1,150 USD
Non-Member Non-Physician	<input type="checkbox"/> \$500 USD	<input type="checkbox"/> \$250 USD	<input type="checkbox"/> \$500 USD	\$600 USD
Industry Representative	<input type="checkbox"/> \$1,100 USD	<input type="checkbox"/> \$250 USD	<input type="checkbox"/> \$500 USD	\$1,200 USD
Delegates from Reduced Rate Countries**	<input type="checkbox"/> \$350 USD	<input type="checkbox"/> \$250 USD	<input type="checkbox"/> \$500 USD	\$450 USD

* The delegate base registration fee includes entrance to the general and concurrent sessions, special symposia, instructional course lectures, roundtable discussions, complications series, debates, lunch with the experts, the IMAST exhibit hall, breakfasts, breaks, lunches and the Welcome Reception on Wednesday, July 13. To register a guest please see guest form at www.srs.org/ima2016/registration.

**For information on countries that qualify for reduced rate registration, please visit the SRS website at www.srs.org/ima2016/registration.

Session Selection – (selection may be changed onsite)	Date
Special Symposium	Wednesday, July 13
SSA – Modern Perspectives on Spine Care: Where is Healthcare Going?	<input type="checkbox"/>
SSB – Novel Treatment Techniques in Spinal Deformity	<input type="checkbox"/>
3A-D: Concurrent Instructional Course Lectures #1A-C and 2-Minute Point Presentations	Thursday, July 14
3A – Adult Deformity: Clinical & Radiographic Evaluation	<input type="checkbox"/>
3B – Management of Primary Spine Tumors	<input type="checkbox"/>
3C – AIS: Clinical & Radiographic Evaluation	<input type="checkbox"/>
3D – 2-Minute Point Presentations #1	<input type="checkbox"/>
5A-D: Concurrent Roundtable Sessions #1A-C and Abstracts	Thursday, July 14
5A – Cervical Spine Trauma	<input type="checkbox"/>
5B – Adolescent Idiopathic Scoliosis	<input type="checkbox"/>
5C – Adult Degenerative Scoliosis	<input type="checkbox"/>
5D – Innovative and Diagnostic Methods (Abstracts)	<input type="checkbox"/>
8A-E: Concurrent Roundtable Sessions and 2-Minute Point Presentations Sessions	Friday, July 15
8A – MIS Deformity Correction (Adult and Pediatric)	<input type="checkbox"/>
8B – PJK Considerations	<input type="checkbox"/>
8C – Cervical Degenerative Disease & CSM	<input type="checkbox"/>
8D – Thoracolumbar Trauma	<input type="checkbox"/>
8E – 2-Minute Point Presentations #2	<input type="checkbox"/>
9A-D: Concurrent Abstracts, Debate Sessions, and ICLs	Friday, July 15
9A – Kyphosis/Congenital/Neuromuscular Deformity (Abstracts)	<input type="checkbox"/>
9B – Debate Session #3	<input type="checkbox"/>
9C – What is New in Pediatric Deformity	<input type="checkbox"/>
9D – International Spine ICL	<input type="checkbox"/>
10A-E: Concurrent Instructional Course Lectures and 2-Minute Point Presentations Sessions	Friday, July 15
10A – Pediatric Deformity: Common Challenges in Treatment and Correction	<input type="checkbox"/>
10B – Adult Deformity II: Goals and Complication Avoidance	<input type="checkbox"/>
10C – Safety ICL	<input type="checkbox"/>
10D – Management of Junctional Failures	<input type="checkbox"/>
10E – 2-Minute Point Presentations #3	<input type="checkbox"/>
11A-C: Concurrent Instructional Course Lectures	Saturday, July 16
11A – Management of Degenerative Cervical Myelopathy AOSpine and CSRS Guidelines: AOSpine North America and AOSpine International Special Symposium	<input type="checkbox"/>
11B – What Is New In Lumbar Degenerative Surgery	<input type="checkbox"/>
11C – Emerging Technologies in Spine Surgery	<input type="checkbox"/>
Session 13: Lunch with the Experts: Top Pearls and Pitfalls I Have Learned in My Career	Saturday, July 16 <input type="checkbox"/>

***These educational programs are included in the base registration fee, but delegates are asked to indicate which sessions they plan to attend.

Social Event Add-Ons	Date	Additional Fee
Welcome Reception	Wednesday, July 13	\$0 USD <input type="checkbox"/>
Course Reception	Friday, July 15	\$25 USD <input type="checkbox"/>

Total Fees \$ _____ USD

Cancellation Policy:

All cancellations must be received in writing. Delegates may fax their cancellation to (414) 276-3349 or email it to meetings@srs.org. Delegates will receive a confirmation and refund within 14 days of receipt of their cancellation notice. SRS will grant a full refund, less a 10% processing fee, for cancellations received in writing on or before July 1, 2016. No refunds will be granted after July 1, 2016. SRS Tax ID #23-7181863

Waiver:

Submission of this registration form and payment of associated fee serves as agreement by the delegate to release the Scoliosis Research Society, the Marriott Marquis and their respective agents, servants, employees, representatives, successors, and assigns, from any and against all claims, demands, causes of action, damages, costs, and expenses, including attorneys' fees, for injury to person or damage to property arising out of attendance at IMAST 2016. In addition, the delegate hereby grants permission to use his/her likeness in a photograph or other digital reproduction in any and all of its publications, including website entries, without payment or any other consideration, agreeing that these materials will become the property of SRS which has the right to edit, alter, copy, exhibit, publish or distribute this photo for purposes of publicizing its programs or for any other lawful purpose. Additionally, the delegate waives any right to royalties or other compensation arising or related to the use of the photograph.

☐ I do not wish to be included on the delegate list provided to exhibitors.

☐ I do not wish to be included on any published delegate list including programs, mobile apps, etc.

PAYMENT INFORMATION

Checks (US funds drawn on a US bank only) may be made payable and mailed to:

Scoliosis Research Society • 555 E. Wells Street, Suite 1100 • Milwaukee, WI 53202

Or provide credit card information with complete billing address:

☐ Check Enclosed ☐ Visa ☐ MasterCard ☐ American Express

Card Number _____ Security Code _____

Expiration Date _____

Name (As it appears on the card) _____

Billing Address _____

City _____ State _____ Zip/Postal Code _____

Country _____

Signature (I agree to pay according to the card issuer agreement) _____



IMAST 2016 GUEST

REGISTRATION
FORM

23RD International Meeting on Advanced Spine Techniques • JULY 13–16, 2016 • WASHINGTON, D.C., USA • MARRIOTT MARQUIS
ADVANCE REGISTRATION DEADLINE: JUNE 15, 2016 (Registrations will ONLY be accepted onsite after this date – no exceptions)

GUEST INFORMATION

ONLINE REGISTRATION AVAILABLE AT WWW.SRS.ORG/IMAST2016/REGISTRATION

SRS ID Number	First (Given) Name	Last (Family) Name	Suffix (Jr., III, etc)	Degree (MD, PhD, etc)
Email Address (All correspondence is done by email)		Institution		
Mailing Address				
City	State	Zip/Postal Code	Country (To appear on badge)	
Dietary Restrictions/Requirements				

I am a guest of the following REGISTERED delegate:

SRS ID Number	First (Given) Name	Last (Family) Name	City
---------------	--------------------	--------------------	------

Base Registration Fees*

*Guest attendance only includes the ability to register for social events and does not include session admittance.

Guest ☐ \$0 USD

*Guests registering using this form are able to register for the Welcome Reception on Wednesday, July 13 for \$20 and the Course Reception on Friday, July 15 for an additional \$30. **Entrance to the scientific sessions is not included in the guest registration fees.** Only guests registered as Non-Member Non-Physicians will be allowed to participate in the scientific sessions and breaks. Please use the delegate registration form to register as a Non-Member Non-Physician. Sorry, no exceptions will be made.

Advance Registration

On or Before June 15, 2016

Social Event Add-Ons

Date

Additional Fee

Welcome Reception	Wednesday, July 13	\$20 USD	<input type="checkbox"/>
Course Reception	Friday, July 15	\$30 USD	<input type="checkbox"/>

Total Fees \$ _____ USD

PAYMENT INFORMATION

Checks (US funds drawn on a US bank only) may be made payable and mailed to:
Scoliosis Research Society • 555 E. Wells Street, Suite 1100 • Milwaukee, WI 53202

Or provide credit card information with complete billing address:

☐ Check Enclosed ☐ Visa ☐ MasterCard ☐ American Express

Card Number	Security Code	
Expiration Date		
Name (As it appears on the card)		
Billing Address		
City	State	Zip/Postal Code
Country		
Signature (I agree to pay according to the card issuer agreement)		

Cancellation Policy:

All cancellations must be received in writing. Delegates may fax their cancellation to (414) 276-3349 or email it to meetings@srs.org. Delegates will receive a confirmation and refund within 14 days of receipt of their cancellation notice. SRS will grant a full refund, less a 10% processing fee, for cancellations received in writing on or before July 1, 2016. No refunds will be granted after July 1, 2016.

Waiver:

Submission of this registration form and payment of associated fee serves as agreement by the delegate to release the Scoliosis Research Society, the Marriott Marquis and their respective agents, servants, employees, representatives, successors, and assigns, from any and against all claims, demands, causes of action, damages, costs, and expenses, including attorneys' fees, for injury to person or damage to property arising out of attendance at IMAST 2016. In addition, the delegate hereby grants permission to use his/her likeness in a photograph or other digital reproduction in any and all of its publications, including website entries, without payment or any other consideration, agreeing that these materials will become the property of SRS which has the right to edit, alter, copy, exhibit, publish or distribute this photo for purposes of publicizing its programs or for any other lawful purpose. Additionally, the delegate waives any right to royalties or other compensation arising or related to the use of the photograph.

SRS Tax ID #23-7181863



IMAST 2016 GROUP

REGISTRATION
FORM

23RD International Meeting on Advanced Spine Techniques • JULY 13–16, 2016 • WASHINGTON, D.C., USA • MARRIOTT MARQUIS
ADVANCE REGISTRATION DEADLINE: JUNE 1, 2016 (Registrations will ONLY be accepted onsite after this date – no exceptions)

COMPANY/BILL TO INFORMATION

ONLINE REGISTRATION AVAILABLE AT WWW.SRS.ORG/IMAST2016/REGISTRATION

Company Name _____

Company Representative _____

Email Address (Invoice and all correspondence will be sent to this email) _____

Mailing Address _____

City _____ State _____ Zip/Postal Code _____

Country _____

Base Registration Fees*	Advance Registration On or Before June 15, 2016
SRS Fellows – Physician	\$850 USD
SRS Fellows – Non-Physician	\$400 USD
SRS Emeritus Fellows	\$400 USD
Resident/Fellow/Medical Student	\$400 USD
Non-Member Physician	\$1,050 USD
Non-Member Non-Physician	\$500 USD
Industry Representative	\$1,100 USD
Delegates from Reduced Rate Countries**	\$350 USD

SRS will verify member types and apply discounts where delegates are eligible.

* The delegate base registration fee includes entrance to the general and concurrent sessions, special symposia, instructional course lectures, roundtable discussions, complications series, debates, lunch with the experts, the IMAST exhibit hall, breakfasts, breaks, lunches, and the Welcome Reception on Wednesday, July 13.

**For information on countries that qualify for reduced rate registration, please visit the SRS website at www.srs.org/imast2016/registration.

PAYMENT INFORMATION

Group Registration Policy:

All Group Registrants must be completed and submitted by June 1, 2016. Any Pre-Registration name changes can be made through June 15, 2016 at no charge. After June 15 each name change will be charged an administrative fee of \$100 per badge. Any delegate not included on the group registration form will be treated as an individual registration; delegates registered as individuals will not be added to group registration invoices.

All delegates must have their own email address listed under their name to ensure certificates of attendance and CME credits are correctly distributed.

Corporate Supporters and/or Exhibitors with complimentary registration codes; please indicate who the code is being applied to by writing the code next to the delegate's name. If no codes are written in, complimentary registrations will be applied to delegate registrations in the order they are listed on the form.

Invoice:

An invoice will be provided to company/group representative, for groups registering more than 5 delegates, one week post the June 15 name change deadline. This invoice will contain all registration fees for all delegates listed; all invoices must be paid by July 8, 2016.

Any registration fees, registration name change fees or add-ons made after June 15 and/or onsite will be invoiced separately. Post meeting invoices will be sent out 4 weeks following IMAST.

Cancellation Policy:

All cancellations must be received in writing. Delegates may fax their cancellation to (414) 276-3349 or email it to meetings@srs.org. Delegates will receive a confirmation and refund within 14 days of receipt of their cancellation notice. SRS will grant a full refund, less a 10% processing fee, for cancellations received in writing on or before July 1, 2016. No refunds will be granted after July 1, 2016.

SRS Tax ID #23-7181863

Waiver:

Submission of this registration form and payment of associated fee serves as agreement by the delegate to release the Scoliosis Research Society, the Marriott Marquis and their respective agents, servants, employees, representatives, successors, and assigns, from any and against all claims, demands, causes of action, damages, costs, and expenses, including attorneys' fees, for injury to person or damage to property arising out of attendance at IMAST 2016. In addition, the delegate hereby grants permission to use his/her likeness in a photograph or other digital reproduction in any and all of its publications, including website entries, without payment or any other consideration, agreeing that these materials will become the property of SRS which has the right to edit, alter, copy, exhibit, publish or distribute this photo for purposes of publicizing its programs or for any other lawful purpose. Additionally, the delegate waives any right to royalties or other compensation arising or related to the use of the photograph.

☐ I do not wish to be included on the delegate list provided to exhibitors.

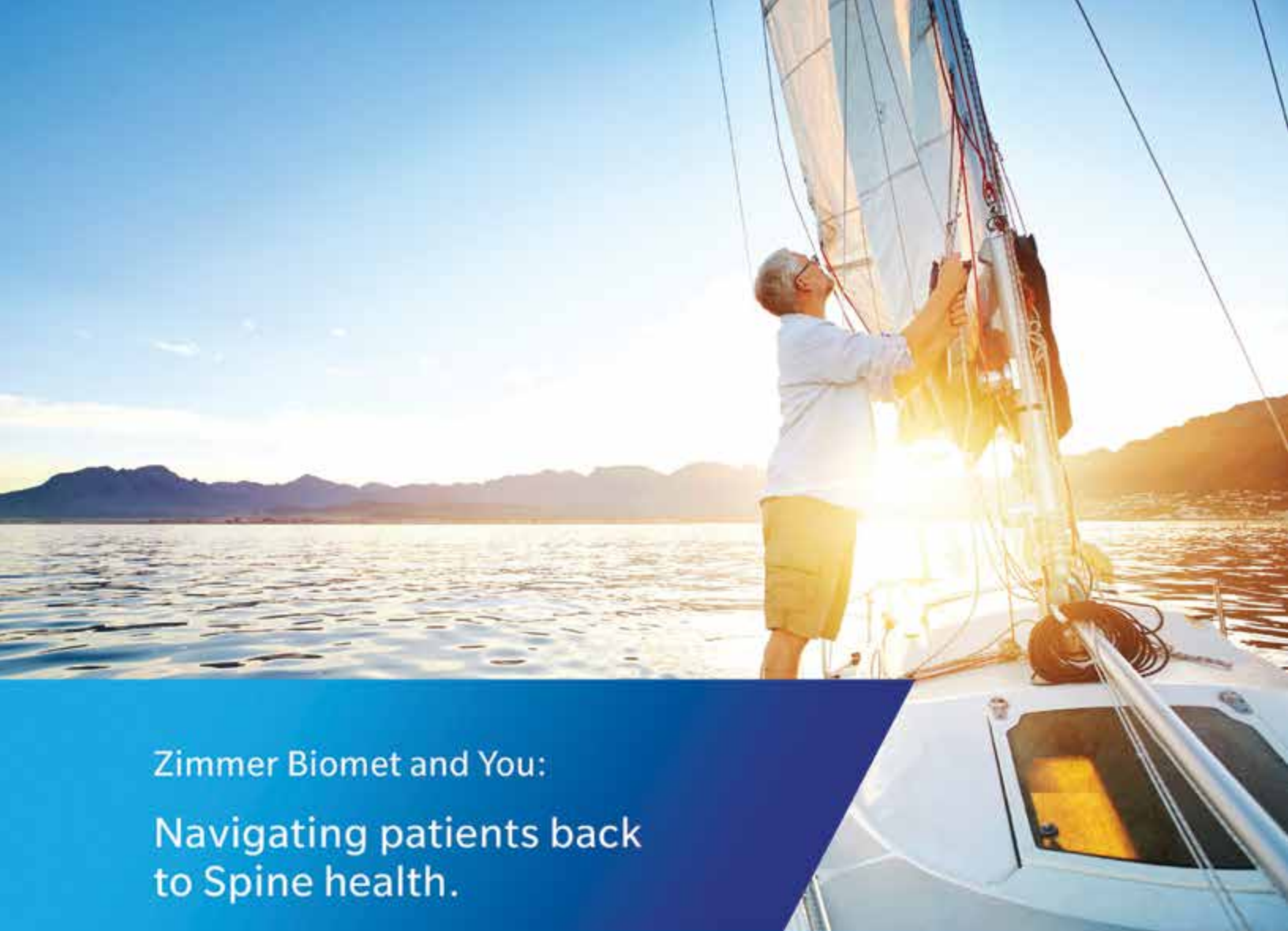
☐ I do not wish to be included on any published delegate list including programs, mobile apps, etc.

DELEGATE INFORMATION

Delegate 1	First (Given) Name _____	Last (Family) Name _____
	Suffix (Jr., III, etc) _____	Degree (MD, PhD, etc) _____
	Delegate Email address — must be delegate's individual email _____	
	Institution _____	
	City _____	Country (to appear on badge) _____
	Course Reception Ticket: \$25 USD <input type="checkbox"/>	
Physician <input type="checkbox"/> Non-Physician <input type="checkbox"/> Industry <input type="checkbox"/> Resident/Fellow/Medical Student <input type="checkbox"/>		
Delegate 2	First (Given) Name _____	Last (Family) Name _____
	Suffix (Jr., III, etc) _____	Degree (MD, PhD, etc) _____
	Delegate Email address — must be delegate's individual email _____	
	Institution _____	
	City _____	Country (to appear on badge) _____
	Course Reception Ticket: \$25 USD <input type="checkbox"/>	
Physician <input type="checkbox"/> Non-Physician <input type="checkbox"/> Industry <input type="checkbox"/> Resident/Fellow/Medical Student <input type="checkbox"/>		
Delegate 3	First (Given) Name _____	Last (Family) Name _____
	Suffix (Jr., III, etc) _____	Degree (MD, PhD, etc) _____
	Delegate Email address — must be delegate's individual email _____	
	Institution _____	
	City _____	Country (to appear on badge) _____
	Course Reception Ticket: \$25 USD <input type="checkbox"/>	
Physician <input type="checkbox"/> Non-Physician <input type="checkbox"/> Industry <input type="checkbox"/> Resident/Fellow/Medical Student <input type="checkbox"/>		
Delegate 4	First (Given) Name _____	Last (Family) Name _____
	Suffix (Jr., III, etc) _____	Degree (MD, PhD, etc) _____
	Delegate Email address — must be delegate's individual email _____	
	Institution _____	
	City _____	Country (to appear on badge) _____
	Course Reception Ticket: \$25 USD <input type="checkbox"/>	
Physician <input type="checkbox"/> Non-Physician <input type="checkbox"/> Industry <input type="checkbox"/> Resident/Fellow/Medical Student <input type="checkbox"/>		
Delegate 5	First (Given) Name _____	Last (Family) Name _____
	Suffix (Jr., III, etc) _____	Degree (MD, PhD, etc) _____
	Delegate Email address — must be delegate's individual email _____	
	Institution _____	
	City _____	Country (to appear on badge) _____
	Course Reception Ticket: \$25 USD <input type="checkbox"/>	
Physician <input type="checkbox"/> Non-Physician <input type="checkbox"/> Industry <input type="checkbox"/> Resident/Fellow/Medical Student <input type="checkbox"/>		

*Please use additional forms to register more than 5 delegates.

**Delegates personal email addresses are required. The company representative will be copied on all correspondence.



Zimmer Biomet and You: Navigating patients back to Spine health.

It's not just what we make;
it's what we make possible.

As one company, Zimmer Biomet partners with you to deliver complete **Spine solutions** and achieve your goals. Together, we innovate to address your clinical needs and promote the best possible patient outcomes.

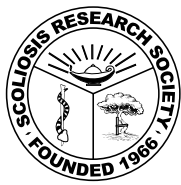
Visit us at IMAST to explore our newly expanded Spine portfolio, featuring the industry-leading Timberline® Lateral Fusion and PathFinder NXT® Minimally Invasive Pedicle Screw Systems.

ZIMMER BIOMET SPINE, INC. / Broomfield, CO / 866.378.4195 / zimmerbiomet.com

© 2016 ZIMMER BIOMET SPINE, INC. All rights reserved. All trademarks are the property of ZIMMER BIOMET SPINE, INC., Zimmer, Inc., or one of its subsidiaries unless otherwise indicated. Rx Only.



ZIMMER BIOMET
Your progress. Our promise.™

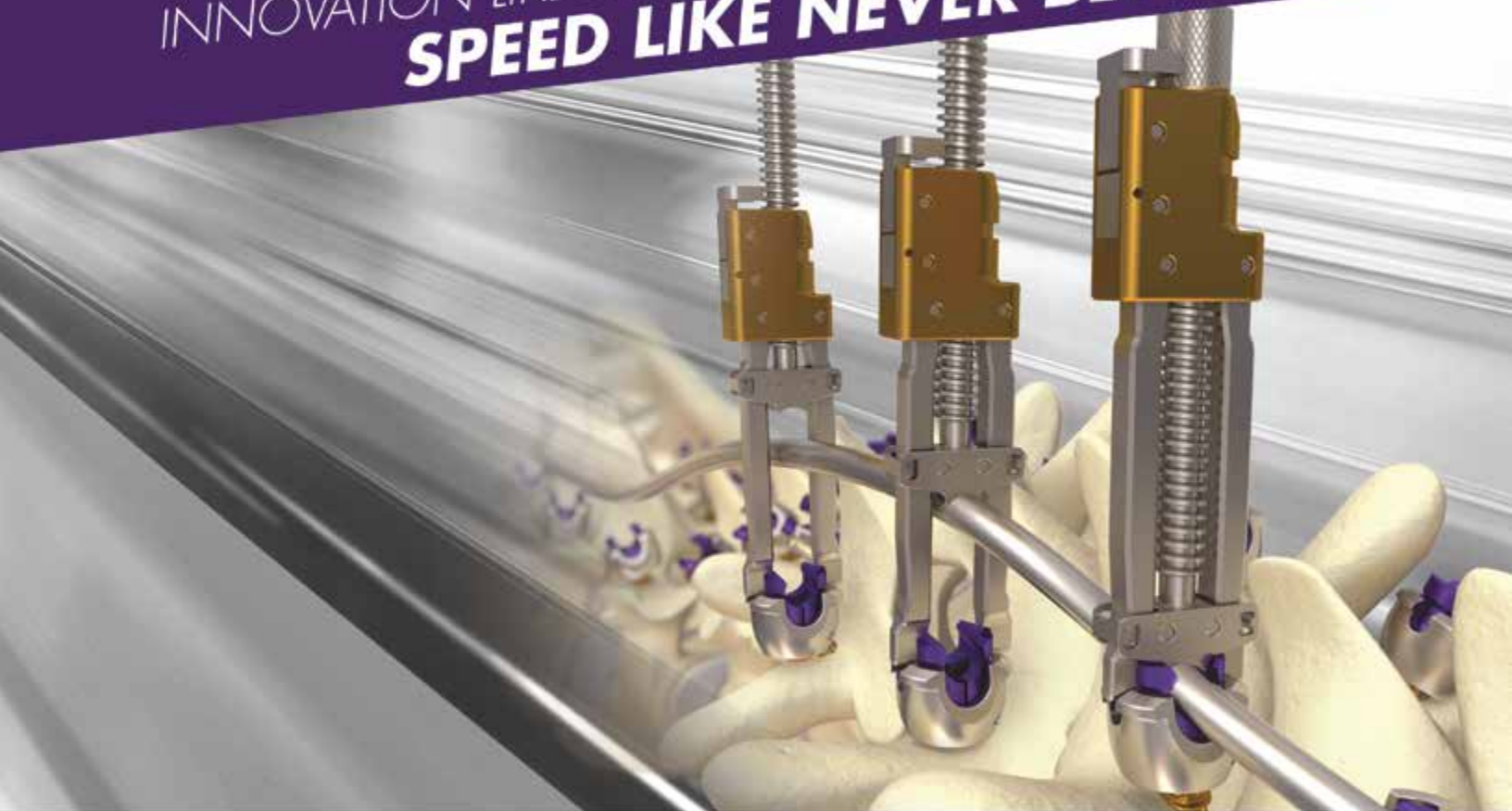


Scoliosis Research Society
555 E. Wells Street, Suite 1100
Milwaukee, WI 53202

Non Profit Org.
US Postage
PAID
Permit No. XXXX
Milwaukee, WI



INNOVATION LIKE ALWAYS
SPEED LIKE NEVER BEFORE



INTRODUCING MESA® 2

The next-generation MESA® 2 screws and streamlined instrumentation allow for the most difficult correction maneuvers for complex spinal pathologies.

Learn more about MESA 2 by visiting: spineK2M.com/IMAST-MESA2

www.K2M.com 1.866.526.4171

