SEATTLE SCIENCE FOUNDATION

8th Annual SSF Robotics Course
aka "Everything Cool in Spine Surgery"
Saturday, December 9, 2023

AGENDA

7 a.m. **Registration & Breakfast**

7:30 a.m. **Welcome, Introductions, Course Overview**
Doniel Drazin, M.D., Isador Lieberman, M.D., M.B.A., J. Patrick Johnson, M.D. & Jens R. Chapman, M.D.

7:35 a.m. **Expanding the Frontiers of Technology-Assisted Surgery**
Roger Hartl, M.D. (virtual)
Objectives:
- *Describe examples on the state of robotic-assisted surgery today*
- *Outline the expanding frontiers of technology-assisted surgery*
- *Present cases that illustrate the expanding frontiers of technology-assisted surgery*

7:50 a.m. **Q & A**

7:55 a.m. **Artifical Intelligence and Pre-Operative Planning**
Isador Lieberman, M.D., M.B.A.
Objectives:
- *Elucidate the types of cases that would benefit from preoperative planning*
- *Demonstrate a typical case of preoperative planning*
- *Update on AI*

8:10 a.m. **Q & A**

8:15 a.m. **Lumbo-pelvic Fixation for Deformity with Navigation and/or Robotics**
David Polly, M.D.
Objectives:
- Identify which cases are suitable for SI fusion
- Describe steps to perform MIS robotic-assisted SI fusion
- Describe steps to perform Navigation-assisted SI fusion

8:30 a.m. **Q & A**

8:35 a.m. **Convincing Your Hospital to Invest in Navigation/Robotics/AR/VR**
Terrence Kim, M.D.
Objectives:
- Evaluate the cost of navigation and robotics
- Illustrate the barriers to implementing assistive technologies in your hospital
- Define talking points to hospital administrators why technology is essential for advancing patient care and outcomes

8:50 a.m. **Q & A**

8:55 a.m. **<u>Live Demonstration Broadcast from BioSkills Lab No. 1</u>**
Navigated Lumbar-Pelvic Fixation
David Polly, M.D.
Objectives:
- *Outline the workflow for setting up a SI surgery*
- *Demonstrate the nuances of performing the surgery*
- *Illustrate the pearls of performing the surgery*

9:25 a.m. **Q & A**

9:30 a.m. **Pearls and Pitfalls of Technology-Assisted Surgeries**
Moderator: Doniel Drazin, M.D. and J. Patrick Johnson, M.D.,
Panel: Isador Lieberman, M.D., M.B.A., Terrence Kim, M.D., David Polly., M.D., Andrew Manista, M.D. &
Objectives:
- *Outline pearls for successful robotic-assisted surgeries*
- *Contrast pitfalls of unsuccessful robotic-assisted surgeries*
- *Identify and evaluate lessons learned from failures of robotic-assisted surgeries*

10:05 a.m. **Q & A**

10:10 a.m. **Break & Exhibits** *(not for CME Credit)*

10:25 a.m. **The Good, The Bad, & The Ugly of Spinal Robotics**
Kevin Foley, M.D. (virtual)
Objectives:
- *Update on the current state of spinal robotic technologies*
- *Describe advantages, limitations, and future needs of spinal robots*

10:40 a.m. **Q & A**

10:45 a.m. **<u>Live Demonstration Broadcast from BioSkills Lab No. 2</u>**
Robotic-Assisted Cervical Pedicle Screws
Michael Gallizzi, M.D.
Objectives:
- *Demonstrate robotic-assisted cervical fusion*
- *Demonstrate minimally invasive cervical fusion using robotic assistance*
- *Employ robotic-assisted surgery in the cervical spine using different techniques*

11:15 a.m. **Q & A**

11:20 a.m. **The 2024 Update on Augmented Reality in Spine Surgery**
Chester Donnally, M.D. (virtual)
- Define Augmented Reality
- Explain open vs. percutaneous, is this technology great for both?
- Describe what is on the horizon for augmented reality technology in 20204

11:35 a.m. **Q & A**

11:40 a.m. **Live Demonstration Broadcast from BioSkills Lab No. 3**
Robotic Assisted Thoracolumbar Fusion
Anderew Manista, M.D.
Objectives:
- *Demonstrate robotic-assisted thoracolumbar fusion*
- *Demonstrate minimally invasive thoracolumbar fusion using robotic assistance*
- *Employ robotic-assisted surgery in the thoracolumbar using different techniques*

12:10 p.m. **Q & A**

12:15 p.m. **Lunch Break & Exhibits** (working lunch)

12:30 p.m. **MIS & Robotics: Pearls of My Practice**
Ali Anissipour, M.D. (virtual)
Objectives:
- Navigate learning curve challenges of robotics in spine surgery
- Describe pearls of practice to equip colleagues to minimize complications
- Illuminate the future of spine surgery by exploring the possibilities that emerge from facet decortication

12:45 p.m. **Q & A**

12:50 p.m. **Live Demonstration Broadcast from BioSkills Lab No. 4**
Minimally Invasive Robotic Arthrodesis
Terrence Kim, M.D.
Objectives:
- Exemplify planning and workflow of minimally invasive robotic-assisted arthrodesis
- Demonstrate minimally invasive robotic assisted facet decortication
- Execute bone graft placement using robotic guidance

1:20 p.m. **Q & A**

1:25 p.m. **Current & Emerging Trends in Imaging and Robotics**
Nicholas Theodore, M.D (pre-recorded)
Objectives:
- *Describe the current emerging trends in imaging*
- *Outline the current indication for utilizing robotics in spine surgery*
- *Predict emerging trends in the future of spine surgery*

1:40 p.m. **Q & A**

1:45 p.m. ***End of CME Accredited Content***

2:15 p.m. **Introducing Expanded Existence – Building the Surgical Metaverse-AI Enhanced Surgery**
Jeff Larson, M.D.

2:30 p.m. **Q & A**

2:35 p.m. **Open Technology Experience** (in Lab)

3:15 p.m. **Adjourn**

DISTINGUISHED FACULTY

J. Patrick Johnson, M.D.
Course Co-Chair
Co-Medical Director, Spine Center
Vice Chair, Neurosurgery
Cedars-Sinai Medical Center
Los Angeles, California

Doniel Drazin, M.D.
Course Co-Chair
Neurosurgeon
Seattle, Washington

Isador Lieberman, M.D., M.B.A.
Course Co-Chair
Orthopaedic Spine Surgeon
Texas Back Institute
Plano, Texas

Jens R. Chapman, M.D.
Course Co-Chair
Complex Spine Surgeon
Swedish Neuroscience Institute
Seattle, Washington

Ali Anissipour, D.O. (virtual)
Orthopedic Spine Surgeon
WWMG Everett Gateway Center - Orthopedics
Everett, Washington

Chester Donnally, M.D. (virtual)
Orthopedic Spine Surgeon
Texas Spine Consultants
Plano, Texas

Kevin Foley, M.D. (virtual)
Professor of Neurosurgery, Orthopaedic Surgery, & Biomedical Engineering
University of Tenessee Health Science & Semmes Murphey Clinic
Memphis, Tennesse

Michael Gallizzi, M.D.
Robotic & Endoscopic Spine Surgeon
The Steadman Clinic
Vail, Colorado

Roger Hartl, M.D. (virtual)
Hanson-MacDonald Professor of Neurological Surgery and Director of Spinal Surgery
Weill Cornell Medicine Brain and Spine Centers
New York, New York

Terrence Kim, M.D.
Co-Director of Education & Spine Fellowship Program Assistant Professor Department of Orthopaedics
Cedars-Sinai Medical Center
Los Angeles, California

Jeffrey Larson, M.D.
Neurosurgeon
Coeur d'Alene Spine and Brain
Coeur d'Alene, Idaho

Andrew Manista, M.D.
Orthopaedic Surgeon
Olympia Orthopaedic Associates
Olympia, Washington

David Polly, M.D.
Professor & Chief of Spine Surgery Department of Orthopedic Surgery
University of Minnesota Medical School
Minneapolis, Minnesota

Nicholas Theodore, M.D., M.S. (pre-recorded)
Director, Neurosurgical Spine Center & Professor of Neurosurgery
Johns Hopkins Medicine
Baltimore, Maryland

Surgical Demonstrations Supported by Swedish Neuroscience Institute Fellows
Bryan Anderson, D.O., Donald Davis III, M.D., Neel Patel, M.D., & Gautam Rao, M.D.