



# TELESURGERY

SRS 2024

THURSDAY, JUNE 20 • PLUMERIA C & D

CO-CHAIRS: Vipul Patel, Rick Satava and Mischa Dohler

9:00am - 12:00pm

**CLOSED GROUP SESSION OF THE KEY STAKEHOLDERS - INVITE ONLY**

Moderators: Vipul Patel, Mischa Dohler, P. Das Gupta, Rick Satava, A. Sachdeva  
Panelists: M. Anvari, D. Diamond

9:00am - 9:30am

**Telesurgery Overview: Recap of the Telesurgery Landscape** *Vipul Patel and Mischa Dohler*

9:30am - 9:45am

**Finding of the Telesurgery Collaborative Community: Delphi Consensus Questionnaire** *J. Collins*

9:45am - 12:30pm

**In Depth Discussion Points for the Telesurgery Collaborative Community Working Group**

**9:45am - 10:30am - Medical Workstream Discussion Points**

*Moderators: Vipul Patel and P. DasGupta*

*Panelists: A. Siddiqui, Martin Martino, K. Hakamada, L. Kavoussi, S. Horgan, T. Heniford, M. Roche, A. Mottrie*

- From the medical viewpoint what steps are necessary to ensure the seamless adoption and integration of telesurgical technologies in clinical settings? *L. Kavoussi*
- What strategies can be implemented to develop short, mid, and long-term medical use cases for telesurgery? *M. Roche*
- How can we effectively upskill and reskill medical professionals for telesurgery? *A. Mottrie*
- What are the key discussion points that need to be addressed for cross boarder telesurgery between nations? *K. Hakamada*
- What criteria should be established for selecting patients suitable for telesurgery? *S. Horgan*
- Do you think AI will have a role in telesurgery? *T. Heniford*
- What best practices should be adopted to ensure successful telesurgical procedures? *M. Martino*

**10:30am - 11:15am - Technology Workstream Discussion Points**

*Moderators: Mischa Dohler and Jayweera Sudharman (NSF)*

*Panelists: Y Wang, D Oleynikov (VI), M Toloui (NVIDIA), M Toland (MMI), S Srivastava (SSI), M Martino, Rich Mahoney (Intuitive), Monika Hagen (JJ), E Parra Davila, A Ghazi, S Nathan, S Nathan, M Trumbore (FDA), E Fonseca (Xcath), Alex He (Microport), G D'Ippolito (IVIS), Roger Billings (Cradlepoint), M Moschovas, Manuel Bedoya (Verizon), Philip Arthur (AdventHealth), Ryan Winn (AdventHealth)*

- What needs to be done to make robots compatible for telesurgery?
- What measures are required to establish acceptable surgical latency for safe telesurgery?
- How can we determine and achieve the maximum safe distance for telesurgery?
- What strategies should be implemented to manage different networks (cellular, Wi-Fi, cable) for long- distance telesurgery?
- What actions are necessary to build a reliable and secure telecom network for telesurgery?
- What steps must be taken to ensure robust cybersecurity for telesurgical systems?
- How can we secure funding for innovation and deployments of telesurgical technologies?

**11:15am - 12:00pm - Compliance Workstream Discussion Points**

*Moderators: D. Diamond and Rick Satava*

*Panelists: R. Clayman, S. Ross, A. Sachdeva, T. Costello, S. Magnuson, B. Rocco, B. Ashar (FDA), V. Hicks, S Nathan, A. Ramadorai (Medtronic), Chad Dunn*

- What standards and certifications need to be established for telesurgery?
- What business models are most effective for the adoption and sustainability of telesurgical practices?
- What policies and regulations, including net neutrality, must be addressed to facilitate telesurgery?
- How should legal, insurance, and liability issues be managed in telesurgery?
- What ethical guidelines should be developed to ensure integrity, accessibility, and equity in telesurgery?
- What strategies can be implemented for effective patient outreach and maintaining the patient-physician relationship in telesurgery?
- What is required to align state laws and licensure for telesurgery across borders?

12:00pm - 12:05pm

**Telesurgery with Xu Zhang**

12:05pm - 12:30pm

**Recap and Panel QS**



# TELESURGERY

## SRS 2024

THURSDAY, JUNE 20 • PLUMERIA C & D (continued)

CO-CHAIRS: Vipul Patel, Rick Satava and Mischa Dohler

1:30pm - 5:30pm **SRS PLENARY (OPEN TO ALL ATTENDEES FOR THE CONGRESS)**

### SESSION 1: Introduction to Telesurgery

Moderators: Vipul Patel, Mischa Dohler

Panelists: P. Das Gupta, S. Ross, M. Anvari, L. Kavoussi, M. Moschovas, M. Toloui (NVIDIA), M. Zarrouk (NVIDIA)

1:30pm - 1:45pm **Telesurgery: A Humanitarian Pathway to the Democratization of Access to Surgery and Surgical Education** *Vipul Patel*

1:45pm - 2:00pm **Telesurgery Collaborative Community Working Group Meeting in Orlando, Feb 2024 - Review of Delphi Consensus and Transpacific Telesurgery Trial Over 13,000km** *M. Moschovas*

2:00pm - 2:15pm **Basics of Telesurgery 101: Setting the Stage: An Overview of Key Concepts and Definitions** *P. Das Gupta*

2:15pm - 2:30pm **The Challenge: Technical Barriers to the Clinical Application of Real-time Telesurgery Understanding the Nuances of Reliable Connectivity: 5G, 6G, Fiber and Satellite** *Mischa Dohler and Manuel Bedoya*

2:30pm - 2:40pm **Panel Discussion**

### SESSION 2

2:40pm - 3:20pm **Update on Progress of Telesurgery**  
*Moderators: Rick Satava and F. Moll*  
*Panelists: V. Pansadoro, B. Rocco, J. Porter, R. Clayman, P. DasGupta*

- Telerobotic Connectivity to Space. The NASA Mission *S. Farritor*
- Intercontinental Telesurgery (Italy to Dubai) for the Remote Treatment of Optical Diseases *Giuseppe D'Ippolito*
- Telesurgery with the SSI Mantra *S. Srivastava*
- 3 Console Telerobotics for Surgical Education (pre-recorded) *L. Cui*
- The Canadian Experience of Telesurgery *M. Anvari*
- Telerobotic Thrombectomy from Abu Dhabi to S Korea (xCath) *Eduardo Fonseca*

3:20pm - 3:30pm **Panel Discussion**

3:30pm - 3:45pm **Academic/Society Based Approach to the Evolution of Telesurgery** *K. Hakamada*

### SESSION 3

Moderators: Mischa Dohler, D. Diamond, J. Sudharman (NSF)

Panelists: Y. Wang, R. Madder, A. Siddiqui, S. Nathan, A. Sachdeva, F. Moll, I. Gill

3:45pm - 4:00pm **Ensuring End-to-End Cybersecurity for a Safe Telesurgery Systems** *Roger Billings (Cradlepoint)*

4:00pm - 4:15pm **Current Clinical Needs for Telesurgery: Cardiac and Neurovascular Stenting and Clot Removal** *R. Madder and A. Siddiqui*

4:15pm - 4:30pm **A State Licensing Board Perspective on Telesurgery** *David Diamond*

4:30pm - 4:45pm **Telesurgery FDA Sandpit Environment: Evaluating Challenges, Knowledge Gaps, and Acceleration of Regulatory Approvals** *Mischa Dohler and M. Trumbore*

4:45pm - 5:15pm **Panel Discussion: Making Telesurgery a Reality: The Epitome of a Collaborative Community Project. Why All the Stakeholders Play a Critical Role** *M. Anvari*

5:15pm - 5:30pm **Possible Solutions to the Robot Connectivity, Telecom Latency and Security Issues Around Telesurgery** *Mostafa Toloui (NVIDIA)*

5:30pm **Summary** *Vipul Patel and Mischa Dohler*