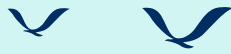




Society for
Technology in
Anesthesia

Advancing Technology Through Education & Innovation



#STA24Houston

STA '24

STA ANNUAL MEETING

*Usability and Design of Future
Anesthesia Practice*

January 11-14, 2024

Royal Sonesta Galleria • Houston, Texas

Program Chairs: Priya Ramaswamy, MD, MEng
and Elie Sarraf, MD, CM

Offering 18.00 AMA PRA Category 1 Credits™

Society for Technology in Anesthesia
6737 W Washington St, Suite 4210 • Milwaukee, WI 53214
(P) 414-389-8600 • (F) 414-755-1346
www.stahq.org • stahq@stahq.org

Meeting Accreditation Information



Activity Overview

The Society for Technology in Anesthesia (STA) 2024 Annual Meeting will provide a platform for anesthesia researchers to present their findings and developments in an effort to improve practices in anesthesia. Specific topics will include user-centered design, advances in Artificial Intelligence, device development and solutions to disparities in medicine.

Educational Objectives

As a result of participation in this CME activity, learners should be able to:

- Describe and conduct user-centered design on innovation in medicine.
- Describe how individuals who have identified unmet needs can create innovation in medical care.
- Summarize how to adopt artificial intelligence in medical care.
- Discuss and identify solutions that may decrease disparity in medicine.
- Discuss the influence of device alarms on medical care.
- Describe the latest updates in medical device regulations.

Target Audience

This live activity is designated for a national and international audience of physicians, engineers and industry members, as well as other practitioners in the field of anesthesia seeking an update on the current and future state of anesthesia technology.

Joint Accreditation Statement

In support of improving patient care, this activity has been planned and implemented by Amedco LLC and Society for Technology in Anesthesia.

Amedco LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team. Amedco Joint Accreditation #4008163.



JOINTLY ACCREDITED PROVIDER™
INTERPROFESSIONAL CONTINUING EDUCATION

Physicians (ACCME) Credit Designation

Amedco LLC designates this live activity for a maximum of 18.00 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Pre-Conference Session

Challenges and Opportunities in Developing Anesthesia Products (for Industry ONLY)

Thursday, January 11, 2024 • 0800 - 1200

Experienced anesthesiologists have developed this course for Annual and Sustaining Corporate Members who may be new to the anesthesia market, as well as those with experience. The course is designed to provide a concise overview of the specialty and an opportunity to discuss the role of technology in a collegial (non-sales) environment. The course is intended to foster one of STA's primary goals, which is to establish relationships between users and developers of technology.

This course will demonstrate the anesthesiologists' interaction with patients and devices through a dynamic, interactive agenda. The day will include expert mini-lectures and group discussions on key aspects of the clinical specialty, including anesthesia 'work', behaviors driving equipment usage, the state of anesthesia-induced unconsciousness and machine function. **OPEN TO INDUSTRY PARTICIPANTS ONLY. PRE-REGISTRATION REQUIRED.**

Schedule of Events

STA'24

Thursday, January 11, 2024

0700-0800

Challenges & Opportunities Registration & Breakfast

(For Industry ONLY – Pre-Registration required)

0800-1700

Exhibitor Registration & Setup

0800-1200

Challenges & Opportunities in Developing Anesthesia Products

(For Industry ONLY – Pre-Registration required)

David Feinstein, MD, MS John Pawlowski, MD, PhD Christopher Quartararo, MD Nate Greenbaum, MD John Sudkamp, MD Charlene Blake, MD, PhD

1800-2000

Registration & Welcome Reception

Friday, January 12, 2024

0700-0800

Registration & Breakfast

0800-0815

Welcome Address

Jonathan Wanderer, MD, MPhil, FASA, FAMIA & Priya Ramaswamy, MD, MEng, Elie Sarraf, MD, CM

Session 1: Keynote Address

Moderators: Elie Sarraf, MD, CM &

Priya Ramaswamy, MD, MEng

0815-0915

KEYNOTE: Developing a Grassroots EHR

Sam Gharbi, MD

0915-0930

Break with Exhibitors & Abstract Posters

Session 2: Auditory Alarms and Displays

Moderator: Robert “Butch” Loeb, MD

0930-1030

Discussion of Medical Device Alarm Sounds for Use in the Operating Room and ICU

Robert “Butch” Loeb, MD & Joe Schlesinger, MD, FCCM

1030-1040

Panel Discussion

1040-1100

Break with Exhibitors & Abstract Posters

Session 3: Innovations and Regulations

Moderator: Julian Goldman, MD

1100-1120

Example-Led Insights: Smart and Autonomous Systems Crossing Regulatory and Business

Thresholds

Kai Kuck, PhD

1120-1140

FDA's Approach to Balancing Innovation and Regulation

Heather Agler, PhD

1140-1200

A Collaborative Community for Smart and Autonomous Medical Systems (SaAMS)

Julian Goldman, MD, FASA

1200-1210

Panel Discussion

1215-1315

Industry Spotlight Luncheon

Moderator: Justin Adams, BSEE, MBA

Session 4: Design and User Interface (UI)

Moderator: Adeel Faruki, MD, MBA

1315-1335

Voice User Interface Driven AI and UX

Elizabeth Rodwell, PhD

1335-1355

Effects and Outcomes of Different Tech Design Features or How We Account for Marginalized, Vulnerable Populations in UX

Pamara Chang, PhD

1355-1415

Why is UI/UX Important for Anesthesia?

Adeel Faruki, MD, MBA

1415-1425

Panel Discussion

1425-1455

Posters in a Minute: Moderated Poster Summaries Group A

1455-1525

Break with Exhibitors & Abstract Posters

Session 5: Abstract Awards & Presentations

Moderator: Thomas Hemmerling, MD, MSc, DEAA

1525-1540

Excellence in Technology Award Presentation

Thomas Hemmerling, MD, MSc, DEAA

1540-1555

Best Clinical Application Award Presentation

Thomas Hemmerling, MD, MSc, DEAA

1555-1610

Best of Show Award Presentation

Thomas Hemmerling, MD, MSc, DEAA

1610-1710

Speed Networking with Corporate Members

Moderators: Priya Ramaswamy, MD, MEng &

Elie Sarraf, MD, CM

Saturday, January 13, 2024

0700-0800

Registration & Breakfast

Session 6: DEI and Technology Solutions that Decrease Disparities

Moderator: Charlene Blake, MD, PhD

0800-0820

A Review of the Problems at Hand

Charlene Blake, MD, PhD

0820-0840

Pulse Oximetry and Global Health

Michael Lipnick, MD

0840-0900

Big Data to Reduce Disparities

Clyde Matava, MBChB, DA, MMed

0900-0910

Panel Discussion

Session 7: Applying AI in Healthcare

Moderator: Andrew Bishara, MD

0920-0940

Convolutional Neural Networks and Physiologic Signal Processing

Richard Epstein, MD

0940-1000

What Has Worked to Date?

David Robinowitz, MD, MHS, MS

1000-1020

Implementation

Andrew Bishara, MD

1020-1030

Panel Discussion

1030-1100

Break with Exhibitors & Abstract Posters

Schedule of Events *continued*

STA'24

Session 8: Physiology and Design Considerations of Space Flight Moderator: Michael Jaffe, PhD

1100-1150
Physiologic and Medical Challenges of Space Flight
David Alexander, MD, MC, CFS, FAAEP

1150-1220
Human Spaceflight Environmental Control and Life Support
Christopher Matty, MS

1220-1230
Panel Discussion

1230-1350
STA Business Luncheon & 2024 J.S. Gravenstein Award Presentation
Jonathan Wanderer, MD, MPhil, FASA, FAMIA & J. Mark Ansermino, MBBCh

Session 9: Research Grant Presentations Moderator: Thomas Hemmerling, MD, MSc, DEAA

1350-1435
2023 STA Research Grant Recipient

1435-1505
Posters in a Minute: Moderated Poster Summaries Group B

1505-1530
Break with Abstract Posters

Session 10: Concurrent Sessions

1530-1700
Hand on Design
Devika Patel, MS

1530-1700
Maker Faire
Patrick Kolbay PhD

1730-1930
STA Reception - The Tuck Room
(*offsite - additional fee applies*)

Sunday, January 14, 2024

0730-0815
Registration & Coffee

STA Engineering Challenge
Moderator: Jeffrey Mandel, MD, MS

0815-1000
Engineering Challenge

1000-1020
Break with Abstract Posters

Session 11: Society for Computing and Technology in Anesthesiology (SCATA) Moderator: Priya Ramaswamy, MD

1020-1050
Invited SCATA Speaker Presentation

Session 12: Leveraging Technology and Homebrew Applications Moderator: Justin Adams, BSEE, MBA

1100-1120
Homebrew Ventilators Using Off the Shelf Hardware Store Components
Samsun Lamptang, PhD, FSSH, FAIMBE

1120-1140
Going From Homebrew to Institutional Adoption of a Technology
Joseph Rinehart MD

1140-1200
Arduino Board
Patrick Kolbay, PhD

1200-1210
Panel Discussion

1210
Meeting Adjourned

Invited Faculty

Justin Adams, BSEE, MBA
AlertWatch

Heather Agler, PhD
US Food and Drug Administration

David Alexander, MD, MC, CFS, FAAEP
NASA

J. Mark Ansermino, MBBCh
University of British Columbia

Andrew Bishara, MD
University of California, San Francisco

Charlene Blake, MD, PhD
University of California, San Francisco

Pamara Chang, PhD
University of Houston

Richard Epstein, MD
University of Miami

Adeel Faruki, MD, MBA
University of Texas MD Anderson Cancer Center

David Feinstein, MD, MS
Beth Israel Deaconess Medical Center

Sam Gharbi, MD
Arya Health

Julian Goldman, MD, FASA
Massachusetts General Hospital

Nate Greenbaum, MD
Beth Israel Deaconess Medical Center

Thomas Hemmerling, MD, MSc, DEAA
McGill University

Michael Jaffe, PhD
Cardiorespiratory Consulting LLC

Kai Kuck, PhD
University of Utah

Patrick Kolbay PhD
University of Utah

Samsun Lamptang, PhD, FSSH, FAIMBE
University of Florida

Michael Lipnick, MD
University of California, San Francisco

Robert "Butch" Loeb, MD
Emeritus Professor of Anesthesiology, Retired University of Florida College of Medicine

Jeffrey Mandel, MD, MS
Mandel Anesthesia Innovations, LLC

Clyde Matava, MBChB, DA, MMed
Hospital for Sick Children University of Toronto

Christopher Matty, MS
NASA

Devika Patel, MS
Penn State College of Medicine

John Pawlowski, MD, PhD
Beth Israel Deaconess Medical Center

Christopher Quartararo, MD
Winchester Anesthesia Associates

Priya Ramaswamy, MD, MEng
University of California, San Francisco Program Co-Chair, STA 2024 Annual Meeting

Joseph Rinehart MD
University of California, Irvine

David Robinowitz, MD, MHS, MS
University of California, San Francisco

Elizabeth Rodwell, PhD
University of Houston

Elie Sarraf, MD, CM
Penn State Health, Milton S. Hershey Medical Center Program Co-Chair, STA 2024 Annual Meeting

Joe Schlesinger, MD, FCCM
Vanderbilt University

John Sudkamp, MD
St. Anthony's Memorial Hospital

Jonathan Wanderer, MD, MPhil, FASA, FAMIA
Vanderbilt University President, STA

Meeting Registration Information



ONLINE REGISTRATION www.stahq.org

Online registration accepted until Wednesday, January 3, 2024 – limited onsite registration is available.

MAIL OR FAX REGISTRATION FORM

This is how your name will appear on your name badge. *Required fields.

*FIRST NAME: [] *LAST NAME: []

*CREDENTIAL(S): []

*COMPANY/INSTITUTIONAL AFFILIATION: []

*ADDRESS: []

*CITY: [] *STATE/PROVINCE: [] *ZIP: [] *COUNTRY: []

*PHONE: []

*EMAIL ADDRESS: []

Special Needs: Hearing Impaired Sight Impaired Other: []
 Dietary (Please Specify) []

REGISTRATION FEES

Registration fee includes course materials, 2 continental breakfasts, 2 lunches and 1 cocktail reception.

	Early Bird by 12/1/23	After 12/1/23
<input type="checkbox"/> STA Member Registration (membership dues must be paid for 2024).....	\$700	\$750
<input type="checkbox"/> STA Lifetime Member Registration (for STA Life Members who want to contribute extra to the Society).....	\$850	\$900
<input type="checkbox"/> *Non-Member Registration.....	\$850	\$900
<input type="checkbox"/> Resident Registration	\$250	\$250

*Non-member fee includes 1 year of membership to qualifying physicians.

A LA CARTE ITEMS

- Additional Thursday Reception Event Ticket..... \$50
- Spouse/Guest Registration..... \$325
- 2024 Membership Dues Renewal..... \$150
- Saturday Reception at The Tuck Room..... \$75
- Lifetime Member Status

SUBTOTAL: []

PAYMENT MUST ACCOMPANY REGISTRATION TOTAL DUE: []

METHOD OF PAYMENT

The following methods of payment are acceptable for the registration fee:

- Check:** Made payable to STA. *There is a \$25 returned check fee.*
 Check Included
- Credit Card Payments:** Visa MasterCard Discover AMEX

NAME ON CARD: []

CARD #: [] SECURITY CODE: [] EXP DATE: [] / []

SIGNATURE: _____

Paper Registration By Fax or Mail (SEE CONTACT INFORMATION BELOW)

If you are unable to register online please fax or mail your paper registration form. STA cannot accept credit card information by email.

Onsite Registration

Online registration accepted until January 3, 2024. After January 3rd limited onsite registration is available.

Registration Cancellation

All cancellations must be in writing and sent via U.S. mail, email or fax. Fee for cancellations postmarked or date stamped before January 3, 2024 will be completely refunded less an administrative fee of \$25. **NO REFUNDS WILL BE MADE AFTER JANUARY 3, 2024.**

Questions? Contact Us:
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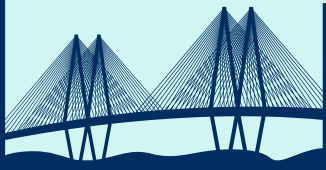
PLEASE NOTE: Registration is not complete until you receive a confirmation email for your pre-registration. If you do not receive this email within 5-7 days of registration, please contact us at 414-389-8600.

It is recommended to bring your confirmation of registration with you to the conference.



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STA '24

STA ANNUAL MEETING

Reservation Phone: 713-627-7600

Room Rate: \$189/night

Reservation Deadline: December 18, 2023

Visit www.stahq.org to book your hotel accommodations online!

January 11-14, 2024

Royal Sonesta Galleria

2222 West Loop South

Houston, TX 77027

Program Chairs:

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