2027 ANNUAL MEETING

Society for Technology in Anesthesia

From Tools to Teammates: Intelligence at the Point of Care

#STA27SCOTTSDALE

JANUARY 14-17, 2027

THE W SCOTTSDALE
SCOTTSDALE, AZ

PROGRAM CHAIRS:
Frederick Kuo, MD &
Karen McCarthy, EdD, MS

Offering 21.50 *AMA PRA Category 1 Credits™*

MEETING ACCREDITATION INFORMATION

Activity Overview

The Society for Technology in Anesthesia (STA) 2027 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 predictive models at the point of care, the societal and systems impacts of artificial intelligence, robotics and hardware, AI in clinical and research workflows, and AI in the business of anesthesia.

Educational Objectives

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

- Identify emerging applications of artificial intelligence, predictive models, robotics, and other technologies in anesthesia practice and research.
- Evaluate the potential impact of technology and AI on patient safety, clinician performance, healthcare systems, and perioperative outcomes.
- Describe strategies for integrating technological innovations into clinical and research workflows, including considerations related to implementation, human factors, and regulatory requirements.
- Apply emerging technology tools and approaches to address clinical, operational, and research challenges in anesthesia.

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.

STA Friday Ty Smith Meeting

Join us on Friday evening for the Ty Smith Meeting, honoring the legacy of Ty Smith, STA Past President (1988–1994), whose contributions to anesthesia and to STA were numerous. Ty helped organize STA, founded the Journal of Clinical Monitoring, and made significant contributions to closed-loop control of anesthesia, modeling and simulation, narcotic-induced rigidity, intraoperative monitoring, and immersive simulation.

Those who worked with Ty knew his passion for innovation and his willingness to take the time to guide others in the right direction. The Ty Smith Meeting provides an opportunity to gather with colleagues, enjoy an evening together, and celebrate Ty's lasting impact on our specialty and organization.

Each ticket includes dinner and one drink ticket. An additional $150 fee applies to attend.

Joint Accreditation Statement

JOINTLY ACCREDITED PROVIDER™
INTERPROFESSIONAL CONTINUING EDUCATION

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. Physicians (ACCME) Credit Designation Amedco LLC designates this live activity for a maximum of 21.50 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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Pre-Conference Session

Challenges & Opportunities 2027:
Build What We'll Actually Use (for Industry ONLY)

Thursday, January 14, 2027 • 0800 - 1200

Experienced anesthesiologists have developed this course for Regular 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 year's course moves from overview to working session. Rather than lecturing on the specialty, faculty will walk participants minute-by-minute through real cases to expose where technology helps, where it gets in the way, and where it gets ignored. Sessions include case studies of clinically sound products that failed adoption and why; a "reverse pitch" in which anesthesiologists present unmet needs and work them through in small groups with participants; a candid look at how devices are actually evaluated and purchased across academic, health-system and ambulatory settings; and open office hours with faculty. Participants will be asked to submit questions and areas of interest in advance so the day can be tailored to the room, will receive a short pre-course primer, and will be invited to a virtual follow-up session with faculty after the meeting.

OPEN TO INDUSTRY PARTICIPANTS ONLY.

SCHEDULE OF EVENTS

Thursday, January 14, 2027

0700-0800
Challenges & Opportunities Registration

0800-1200
Challenges & Opportunities 2027: Build What We'll Actually Use *(For Industry ONLY – Pre-Registration required)*

1400-1800
Exhibitor Registration & Setup

1800-2000
Registration & Welcome Reception

Friday, January 15, 2027

0700-0800
Registration & Breakfast with Exhibitors

0800-0815
Welcome Address
Julia Alejandra Galvez Delgado, MD, MBI; Frederick Kuo, MD; Karen McCarthy, EdD, MS

Session 1: Keynote Address
Moderators: Frederick Kuo, MD & Karen McCarthy, EdD, MS

0815-0915
The Always-On Scout: Clinical AI, Patient Safety, and What It Means for the Anesthesiologist
Jesse M. Ehrenfeld, MD, MPH, FASA, FAMIA, FCPP

0915-0930
Break with Exhibitors & Abstract Posters

Session 2: End-Organ Intelligence: Predictive Models at the Point of Care
Moderator: Kai Kuck, PhD

0930-0950
Brain Monitoring via EEG
Ian Yuan, MD, MEng

0950-1010
Cerebral Oximetry/NIRS
Aymen Alian, MBChB, MD, MSc, MBBCh

1010-1030
Renal Function Monitoring and Risk Detection
Kai Kuck, PhD

1030-1040
Panel Discussion

1040-1100
Break with Exhibitors & Abstract Posters

Session 3: The Broader Footprint: Societal and Systems Impacts of AI
Moderator: Jonathan Wanderer, MD, MPhil, FASA, FAMIA

1100-1120
Economic Impacts of AI
Eric Sun, PhD

1120-1140
Environmental Impacts of Artificial Intelligence in Health Care
Jonathan Tan, MD, MPH, MBI, FASA, FAAP

1140-1200
Equity and Ethics in AI
Charlene Blake, MD, PhD

1200-1210
Panel Discussion

1215-1325
Industry Spotlight Luncheon
Moderator: Scot Carriker, MBA

Session 4: Robotics and Hardware
Moderator: Thomas Hemmerling, MD, MSc, DEAA

1330-1350
Robotic Innovations in Anesthesia
Richard Novak, MD

1350-1410
Robotic Airway Management
Thomas Hemmerling, MD, MSc, DEAA

1410-1430
Virtual Reality in Anesthesia
Sakura Kinjo, MD

1430-1440
Panel Discussion

1445-1525
Posters in a Minute: Moderated Poster Summaries Group A
Moderators: Luis Ahumada, MSCS, PhD & Kelly Michaelsen, MD, PhD

1525-1545
Break with Exhibitors & Abstract Posters

Session 5: Abstract Awards & Presentations
Moderator: Thomas Hemmerling, MD, MSc, DEAA

1545-1555
Excellence in Technology Award Presentation

1555-1605
Best Clinical Application Award Presentation

1605-1615
Best of Show Award Presentation

1625-1725
Trainee Award Presentation

1625-1725
Speed Networking with Corporate Members
Moderator: Scot Carriker, MBA

1725
Ty Smith Meeting (Dinner)
The W Scottsdale • *Additional Fee Applies*

Saturday, January 16, 2027

0700-0800
Registration & Breakfast with Exhibitors

Session 6: AI in Clinical and Research Workflows
Moderator: Mohamed Rehman, MD

0800-0820
Large Language Models in the Electronic Medical Record and Research/QI
Khyzer Aziz, MD

0820-0840
Machine Vision in Clinical Anesthesia
Clyde Matava, MBChB, MMed, MHSc

0840-0900
Modeling Perioperative Care at Scale: Embeddings and Outcome Prediction
Lichy Han, MD, PhD

0900-0910
Panel Discussion

Session 7: AI in the Business of Anesthesia
Moderator: Hannah Lonsdale, MBChB

0915-0935
Smart Scheduling: AI-Driven Optimization for OR Staffing and Throughput
Vik Tiwari, PhD

0935-0955
Maintaining Operational Continuity in the Dark
Ori Gottlieb, MD, FASA

0955-1015
Legal and Regulatory Challenges of Clinical AI
Michael Burns, MD, PhD

1015-1025
Panel Discussion

SCHEDULE OF EVENTS *CONTINUED*

Saturday, January 16, 2027 *continued*

1025-1100
Break with Exhibitors & Abstract Posters

Session 8: From the Editors - Notable Papers from the Past Year
Moderator: Maxime Cannesson, MD, PhD

1100-1120
Journal of Medical Systems
Allan Simpao, MD, MBI, FASA

1120-1140
Anesthesia & Analgesia
Thomas Hemmerling, MD, MSc, DEAA

1140-1200
Anesthesiology
Julia Alejandra Galvez Delgado, MD, MBI

1200-1210
Panel Discussion

1215-1355
STA Business Luncheon &
2027 J.S. Gravenstein Award Presentation
Julia Alejandra Galvez Delgado, MD, MBI &
Robert Loeb, MD

1400-1430
Posters in a Minute: Moderated Poster Summaries Group B
Moderators: Luis Ahumada, MSCS, PhD & Kelly Michaelsen, MD, PhD

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

1435-1505
2026 STA Research Grant Recipient: A Foundation Model for Real-Time Intraoperative State Estimation through Predicted Physiologic Trajectories, Medication Response, and Hypotension Onset Risk
Marc Ghanem, MD

1505-1530
Break with Abstract Posters

Session 10: Concurrent Workshops & Seminar

1530-1730
Hands-on Intro to Coding with Python
Sean Jeffries, MSc

1530-1730
Biodesign
James Xie, MD & Michael Chen, MD

1530-1730
Large Language Models in Clinical and Research Workflows
Frederick Kuo, MD; Ellis Crabtree, PhD;
Brant Tudor, PhD

Sunday, January 17, 2027

0730-0815
Registration & Continental Breakfast

0815-0915
STA Engineering Challenge
Moderator: Jeff Mandel, MD, MS

0915-0930
Break with Abstract Posters

Session 11: ASA Update

0930-1000
ASA Update

Session 12: Power Talks
Moderator: James Xie, MD

1000-1110
Join STA in welcoming our students, residents, fellows, and early-career researchers and clinicians who are ready to share fresh ideas and spark conversation! These fast paced ten-minute Power Talks are back for the STA 2027Annual Meeting.
Justin Do, BS; Xuezhi Dong, MD, MPH;
Eilon Gable, MD; Anvita Mishra, BS

1110
Meeting Adjourned

Invited Faculty

Luis Ahumada, MSCS, PhD
Johns Hopkins All Children's Hospital

Aymen Alian, MBChB, MD, MSc, MBBCh
Yale School of Medicine

Khyzer Aziz, MD
Johns Hopkins University School of Medicine

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

Michael Burns, MD, PhD
University of Michigan

Maxime Cannesson, MD, PhD
UCLA Health

Scot Carriker, MBA
Mindray North America

Michael Chen, MD
Stanford University School of Medicine

Ellis Crabtree, PhD
Johns Hopkins All Children's Hospital

Justin Do, BS
Sidney Kimmel Medical College at Thomas Jefferson University

Xuezhi Dong, MD, MPH
UCLA

Jesse M. Ehrenfeld, MD, MPH, FASA, FAMIA, FCPP
Medical College of Wisconsin

Eilon Gable, MD
UCLA

Julia Alejandra Galvez Delgado, MD, MBI
Boston Children's Hospital/Harvard Medical School

Marc Ghanem, MD
Stanford University School of Medicine

Ori Gottlieb, MD, FASA
University of Chicago

Lichy Han, MD, PhD
Stanford University School of Medicine

Thomas Hemmerling, MD, MSc, DEAA
McGill University

Sean Jeffries, MSc
McGill University

Sakura Kinjo, MD
UCSF

Kai Kuck, PhD
University of Utah

Frederick Kuo, MD
Johns Hopkins All Children's Hospital

Hannah Lonsdale, MBChB
Vanderbilt University Medical Center

Robert Loeb, MD
University of Florida

Clyde Matava, MBChB, MMed, MHSc
SickKids: The Hospital for Sick Children

Karen McCarthy, EdD, MS
Vanderbilt University Medical Center

Kelly Michaelsen. MD, PhD
University of Washington

Anvita Mishra, BS
Carle Illinois College of Medicine

Richard Novak, MD
Stanford University School of Medicine

Mohamed Rehman, MD
Johns Hopkins School of Medicine

Allan Simpao, MD, MBI, FASA
Children's Hospital of Philadelphia

Eric Sun, PhD
Stanford University School of Medicine

Jonathan Tan, MD, MPH, MBI, FASA, FAAP
Children's Hospital of Philadelphia

Jonathan Wanderer, MD, MPhil, FASA, FAMIA
Vanderbilt University Medical Center

Brant Tudor, PhD
Johns Hopkins All Children's Hospital

Vik Tiwari, PhD
Vanderbilt Health

Ian Yuan, MD, MEng
UC San Diego

James Xie, MD
Stanford University School of Medicine

MEETING REGISTRATION INFORMATION

ONLINE REGISTRATION www.stahq.org

Online registration accepted until Wednesday, January 6, 2027 – 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, 3 continental breakfasts, 2 lunches and 1 cocktail reception.

	Early Bird by 11/15/26	Before 12/31/26	After 12/31/26
❒ STA Member Registration *(membership dues must be paid for 2027)*	$700	$725	$750
❒ STA Lifetime Member Registration *(for STA Life Members who want to contribute extra to the Society)*	$850	$875	$900
❒ *Non-Member Registration	$850	$875	$900
❒ Trainee Registration (Student/Resident/Fellow) Registration	$250	$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
- ❒ 2027 Membership Dues Renewal $150
- ❒ Ty Smith Meeting $150
- ❒ Ty Smith Meeting Guest $150
- ❒ Lifetime Member Status $1,500

PAYMENT MUST ACCOMPANY REGISTRATION

SUBTOTAL: **TOTAL DUE:**

METHOD OF PAYMENT

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

1. **Check:** Made payable to STA. ***There is a $25 returned check fee.***
   ❒ Check Included
2. **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 6, 2027. After January 8th 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 1st, 2027 will be completely refunded less an administrative fee of $25. **NO REFUNDS WILL BE MADE AFTER JANUARY 1, 2027.**

Questions? Contact Us:

Society for Technology in Anesthesia
6737 W Washington St
Ste 4270
Milwaukee, WI 53214
stahq@stahq.org
OFFICE: **414-389-8600**
FAX: **414-755-1346**

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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#STA27SCOTTSDALE

JANUARY 14-17, 2027

THE W SCOTTSDALE

7277 E CAMELBACK RD
SCOTTSDALE, AZ 85251

PROGRAM CHAIRS:
Frederick Kuo, MD &
Karen McCarthy, EdD, MS

Reservation Phone: (480) 970-2100
Room Rate: $299/night
Reservation Deadline: December 17, 2026

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

Society for Technology in Anesthesia
6737 W Washington St
Ste 4270
Milwaukee, WI 53214