10th Annual Meeting of the Society for Technology in Anesthesia

Technology for the Next Century

January 12-15, 2000
Disney's Coronado Springs Resort, Lake Buena Vista, FL

Sponsored by University of California San Diego School of Medicine through joint sponsorship with the STA
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Society for Technology in Anesthesia
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www.AnesTech.org
SOCIETY FOR TECHNOLOGY IN ANESTHESIA
COURSE SCHEDULE

WEDNESDAY, JANUARY 12

0800-1700 STA Board of Director’s meetings
1200-1730 Special interest group meetings
1730-2000 Registration
1800-2100 Welcome reception – exhibit area

THURSDAY, JANUARY 13

0700-1600 Registration desk open
0700-1200 Technology exhibits and demonstrations
0700-1200 Research Poster and Software Presentations at all breaks
0700-0800 Continental breakfast
0800-0815 Opening remarks and course overview
0815-1200 Session I – Anesthesia Informatics
Drs. Gordon Gibby Michael Jopling moderators
0815 – 0915 Information Entry
What Tests are Needed? Richard Epstein
Experience with Voice Recognition: Nina Geiger
New Testing Devices and New Opportunities: Michael Husband *
0915 - 0930 Technology exhibits and demonstrations and posters
0930 - 1100 Information Usage
Web-Based Secure Access: Gordon Gibby
Web-Based Workflow Improvement: Mike Jopling
Managed Care in the Information Age: Ariadne’s Thread: Jeff Rose
1100 – 1145 Future Human Factors Displays
Aviation Human Factors Displays: John Wise
Advanced Anesthesia Displays: Dwayne Westenskow
1200-1300 Lunch – Box lunch in Exhibit area
1300-1700 Field Trips Dr. Gordon Gibby, coordinator
1830-2200 Simulator user group meetings and dinners

FRIDAY, JANUARY 14

0700-1600 Registration desk open
0700-1700 Technology exhibits and demonstrations and posters
0700-0800 Research Poster and Software presentations at all breaks
0700-0800 Continental breakfast
0800-0945 Session II – Virtual Reality: When?
Dr. Richard Bartkowski, moderator
Now and the Very Near Future: George Sheplock
Virtual Bronchoscopy: Richard Rowe *
What’s Needed Before VR is really Ready: W. Bosseau Murray *
0945-1015 Technology exhibits and demonstrations and posters
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<tr>
<td>1015-1130</td>
<td>Session III Monitors: What’s Missing</td>
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<tr>
<td></td>
<td>Dr. David Seitman, moderator</td>
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<td></td>
<td>Use of TEE in Non-Cardiac Surgery: Sheldon Goldstein</td>
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<td></td>
<td>How Real is the Data: David Seitman</td>
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<td>Signal Extraction from Noisy Pulse Oximetry Data: Julian Goldman</td>
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<td>1145-1300</td>
<td>Lunch, awards, and business meeting</td>
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<td>1300-1400</td>
<td>Session IV – Selected Abstract Presentations</td>
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<td>Dr. Kirk Shelly, moderator</td>
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<td>1430-1730</td>
<td>Session Va Simulators in Education</td>
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<td>Dr. Daniel Raemer, Moderator</td>
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<td>Simulation Engines in Learning Systems: David Williamson Shaffer</td>
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<td>Medical School Education Using Simulation: Lindsey Henson</td>
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<td>Crisis Resource Management: W. Bosseau Murray</td>
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<td>Simulation Technology: Dan Raemer</td>
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<td>1430-1730</td>
<td>Session Vb Compting Skills to Advance Medical Knowledge</td>
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<td>Dr. Alan Grogono, moderator</td>
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<td>Computers in Medical Practice: Tom Engel</td>
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<td>Using the Web for Practice and Personal Gain: Keith Ruskin</td>
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<td>1830-</td>
<td>Special group event – for guests and family</td>
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SATURDAY, JANUARY 15

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<tr>
<td>0730-1100</td>
<td>Registration desk open</td>
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<td></td>
<td>Technology exhibits and demonstrations and posters</td>
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<tr>
<td>0700-0800</td>
<td>Continental breakfast</td>
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<td>0800-0830</td>
<td>Research Committee Awards</td>
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<td>Fritz Stawitcke, moderator</td>
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<tr>
<td>0830-0930</td>
<td>Session VI - Keynote speaker</td>
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<td>Rocket Triggered Lightning Experiments at the International Center for Lightning Research and Testing at Camp Blanding: Vladimir Rakov</td>
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<tr>
<td>0930-1100</td>
<td>Annual STA Debate</td>
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<td>BIS - Standard?</td>
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<td>Dr. Richard Epstein</td>
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<td>Dr. Theodore Dushane</td>
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<tr>
<td>1130-1200</td>
<td>Course evaluation and close of scientific sessions</td>
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FACULTY DISCLOSURE: Many STA members have associations with corporate entities. Each faculty is required to advise the audience of any conflict of interest or relationship prior to their presentation. Faculty identified with * have (prior to publication of the syllabus) indicated they have a commercial relationship. If you perceive a conflict of interest that has not been disclosed please inform the course director and note so on your evaluation form. Thank you.
ABSTRACTS

POSTERS AND DEMONSTRATIONS
During all breaks in Exhibit area

FORMAL PRESENTATIONS
Friday, January 14  1300
General Session

New Method to Determine Depth of Anesthesia from EEG Measurements
H.E. Veritio-Oja, PhD, Datex-Ohmeda Division, Instrumentarium Corp, Finland

Interactive, Web-Based Educational Simulation of an Anesthesia Machine
Sem Lampotang, Department of Anesthesiology, U of Florida, Gainesville FL

Systematic Error Analysis of the Partial Rebreathing Method for Non-Invasive Cardiac Output
Michael B. Jaffee, PhD., Novametrix Medical Systems, Wallingford CT

False Reliance on “Old” Non-Invasive Blood Pressure (NIBP) Readings: Human Error or Faulty Design?
V. Saglar, MD, Department of Anesthesiology, Yale University School of Medicine, New Haven CT

Research & Awards Committee
Fritz Stawitcke, Chair
Kirk Shelley
Jeff Feldman
Dwayne Westenskow
Richard Bartkowski
Ira Rampil
Allen Ream
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<td>Hartmannsgruber, Max</td>
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<td>Design Patterns and Reflective Programming</td>
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<td>Jaffe, Michael</td>
<td>Novametrix Medical Systems</td>
<td>Systematic Error Analysis of the Partial Rebreathing Method for Non-Invasive Cardiac Output</td>
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<td>Henrichs, Bernadette</td>
<td>Washington University School of Medicine</td>
<td>The Perceptiuons of Student Registered Nurse Anesthetists of the Anesthesia Patient Simulator Experience</td>
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21 Jopling, Mike
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25 Jopling, Mike
St. Ann's Hospital
Effects of Severe Motion on Three Pulse Oximeters Designed for Use in Motion During Induced Transient Hypoxic Episodes
STA 2000 Exhibitors and Supporters

We would like to thank the following companies for their support of the Society for Technology in Anesthesia. Please visit with their representatives during the exhibit times.

**Agilent Technologies**  
Agilent Technologies will feature the ARI CompuRecord Anesthesia Information Management System, the most widely implemented departmental system in North America. The CompuRecord system is fully compatible with Agilent's own Component Monitoring System and Viridia 24, as well as other leading patient monitors.

**ASA Overseas Training Program**  
The ASA Overseas Training Program is an all-volunteer effort of ASA which sends members to Ghana and Tanzania to teach anesthesia in these developing nations. We are always in need of new volunteers to help keep this program. A courtesy booth.

**Aspect Medical Systems**  
The Aspect A-200 monitor with the Bispecvtral Index (BIS) provides a direct measure of the effects of anesthetics on the brain and consciousness. Clinical studies have shown positive outcomes from BIS monitoring including: reduced anesthetic drug usage, faster wake-up times, and improved recovery for patients undergoing general anesthesia.

**Datex-Ohmeda**  
Datex-Ohmeda is a leading manufacturer of patient monitors, anesthesia machines, ventilators, information management systems and supplies for anesthesia and critical care. The company is present in over 100 companies worldwide. Datex-Ohmeda’s vision is to supply technology that provides and uninterrupted flow of information in anesthesia and critical care. Ease of use, flexibility and providing the solution that best fits each customer’s needs will continue to be the company’s overriding goals.

**FluidSense Corporation**  
Fluid Sense has invented an intravenous infusion pump that is significantly more sophisticated in its ability to manage information. Novel technologies provide significant improvements in flow range, size, weight and power consumption. FluidSense is actively working with anesthesiologists to develop systems to improve efficiency and effectiveness in the OR.
GE Marquette Medical Systems
GE Marquette Medical Systems is a leading manufacturer of medical electronics equipment and systems for point-of-care vital signs monitoring, respiratory and gas analysis systems, ventilator management, diagnostic cardiology and clinical information systems. For more information, visit www.mel.com.

Masimo Corporation
Masimo Corporation has developed a fundamentally unique pulse oximetry technology capable of accurately measuring during patient motion, low perfusion and intense light. Masimo SET® technology is offered through its licensees in a variety of different stand-alone and fully configured monitors. A complete line of SpO2 adhesive sensors is also available.

MedSim
MedSim provides the medical community with innovative ways of teaching clinical skills to healthcare professionals by utilizing the Eagle Patient Simulator and the UltraSim simulator. These high-fidelity systems develop and sharpen students’ skills ranging from basic procedures to diagnosis and treatment of patient events to crisis resource management.

Novametrix
Novametrix is a leading designer, manufacturer and marketer of leading edge non-invasive respiratory monitoring products. The product lines include digital pulse oximetry, mainstream capnography, respiratory mechanics and transcutaneous monitors. The new NIC02 non-invasive cardiac output monitor, based on the Frick principle, provides continuous measurement of cardiac output.

Parker Medical
Parker Medical will demonstrate three innovative products. (1) The Parker Flex-Tip Endotracheal tube with a curved, soft flexible tip designed to avoid trauma to the larynx and trachea (2) the Parker Intubation Guide, designed to guide endotracheal tubes easily, rapidly and safely through the glottis and (3) the Parker Intubating Videoscope which allows intubation to be viewed through the ET tube and accomplished in seconds.

PICIS
Picis is a world-leader in the development and marketing of software and Internet-based perioperative and critical care information systems that automate the point of care in high acuity care areas of the healthcare enterprise. PICIS’ integrated solution automatically collects patient data and organizes the caregiver’s workflow in the ICU or OR environments.
Siemens Medical

Siemens Medical Systems will showcase its new anesthesia system KION. A revolutionary system which provides proven gas delivery technology, Infinity monitoring and Ergonomics. The electromedical division of Siemens Medical Systems Inc. produces and markets patient monitoring, Ventilators and Electrocardiology systems. Visit our booth and “see it all come together.”

Spacelabs Medical

Spacelabs Medical will demonstrate clinical information solutions designed to help anesthesia practitioners manage patient care. Our Ultraview Care Network Monitors allow you to review and control patient vital signs and other information systems at the point of care. You will also see the advantages of our Anesthesia Delivery System, Bispectral Index Module, OR Chart, electronic documentation system and 5-agent Multigas Analyzer – our complete perioperative clinical information system.