STA 2004

Planning for the

Perioperative Environment of the Future

4th Annual International Meeting on Medical Simulation:

Collaboration & Innovation:

Building a Stronger Simultion Community

Hyatt Tamaya Resort
Albuquerque/Santa Fe, NM

January 14-18, 2004

Sponsored by the Society for Technology in Anesthesia and the STA Section on Simulation

www.AnesTech.org

Society for Technology in Anesthesia

The Society for Technology in Anesthesia (STA) is an international membership-based non-profit organization. Members are physicians, engineers, students and other non-physicians who represent the users, teachers and developers of anesthesia-related technologies, computing, and simulators. STA has two official Component Sections, a Section on Computing and a Section on Simulation each of which is responsible for a scientific meeting, plus several less formal Special Interest Groups.

The Society for Technology in Anesthesia (STA) is pleased to be a Component Society of the IARS and the sponsor of the Section in *Anesthesia and Analgesia* on Technology, Computing and Simulation. *Anesthesia and Analgesia* is STA's Official Journal.

2003 Board of Directors

President
Robert Loeb, *University of Arizona*
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2003 STA @ ASA Activities
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Computers in Anesthesia XXIV
Hugh Allen, *Virginia Mason Medical Center*

2004 Annual Meeting
Julian Goldman, *Harvard Medical School*

2004 International Meeting on Medical Simulation
Elizabeth Sinz, *University of West Virginia*

American Society for Medical Simulation Task Force
Daniel Raemer, *Harvard Medical School*

STA Program Activities

STA 2004: Planning for the Perioperative Environment of the Future
4th International Meeting on Medical Simulation
STA @ ASA Events
ASA Breakfast Panel, STA Dinner and N. Ty Smith Lecture
Computers in Anesthesia Meeting October following ASA
Annual J.S. Gravenstein Technology Award
***Interface:* STA's electronic newsletter**
STA Annual Research and Technology Grant Award

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Society for Technology in Anesthesia

STA 2004:
Planning for the Perioperative Environment of the Future
&
2004 International Meeting on Medical Simulation:
Collaboration & Innovation:
Building a Stronger Simulation Community

Hyatt Tamaya, Albuquerque/Santa Fe, NM

On behalf of the program committee and the Board of Directors, welcome to this year's STA meetings. We would personally like to thank the outstanding faculty who have generously given their time to prepare and present their lectures, workshops and demonstrations.

Please make every opportunity to network with our exhibitors, faculty and members during the meeting. This type of learning is important and beneficial to everyone. STA is a unique organization whose members represent the practice of anesthesiology as well as industry involved in development and production of technologies used by anesthesiologists in education and medical care. Interaction between the members is a strength of STA. If you are interested in becoming more active in STA and its educational programs, please contact one of the Board members. We welcome participation and involvement at all levels.

Accreditation: This activity has been jointly planned and implemented in accordance with the Essentials and Standards of the Accreditation for Continuing Medical Education. The Society for Technology in Anesthesia is accredited by the ACCME and takes responsibility for the content, quality and scientific integrity of this CME activity.
STA designates this activity for a maximum of 25 CME hours in Category 1 Credit towards the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

Evaluation: It is extremely important that you complete the evaluation form so that we might improve our educational programs and provide you with education that meets your needs. We are especially interested in any conflict of interest you may perceive that has not been appropriately disclosed.

CME certificate: Your CME certificate is enclosed with your on-site registration packet. *Keep for your records.*

Meal functions and special events: Please be sure to wear your name tag and present a ticket for all conference functions.

STA 2004
Julian Goldman, Chair
Kirk Shelley, Research Committee Chair
Butch Loeb & Beverlee Anderson, Local Hosts

Int'l Meeting on Medical Simulation
Lisa Sinz, Chair
Richard Riley, Research Chair
Stefan Moenk, Simulation Workshop Chair
David Wilks, UNM BAT Cave Host

2005 Dates

STA 05 – January 13-15, 2005
IMMS – January 14-16, 2005
Miami, Florida

Special notes

Cyber Café	In the Technology Showcase area, you are welcome to use the cyber café internet access at no charge
Beaming station	You can "beam" the conference materials at the UR Navigation station using a touchcreeen, wires network, Bluetooth and WiFi internet gateway.
UNM Buses for Saturday IMMS workshops	The buses will leave at 12:15 and will run between the UNM BAT Cave (Simulation Center) and the UNM Virtual Reality Center. One bus will run between UNM and the Hyatt. At 5:45p the busses will return to the Hyatt. One bus will provide drop-off in Old Towne Albuquerque for those desiring. A bus ticket is required for initial trip to UNM
Buckaroo at the Bosque	A southwestern buffet with DJ and line dancing. Dress warmly for the hay ride or walk to the site. Dinner ticket required.
Beverage tickets	You will receive 2 beverage tickets upon registration. These may be used at either the welcome reception, Margarita Station (by the hay wagon pickup) or at the Buckaroo banquet. Lost tickets will not be replaced.
Focus Groups	All registrants are welcome to attend either the Thursday or Friday Focus Group Session. These sessions do NOT provide CME credit. The sessions offer industry opportunities to gain focused input from users. Light refreshments are served. Thursday: 5:30 pm Drager Medical Friday: 5:30 pm Datex-Ohmeda/GE Medical

STA 2004:
At a Glance

Wednesday, January 14
10:00 – 3:00 STA Board of Directors meetings
4:00 Registration - continues through Friday

Thursday, January 15
7:00 Continental Breakfast
8:00 Welcome and Introductions
8:15 **Keynote Address: Federal Goals of the Perioperative System of the Future**
9:00 **Session I: OR Workflow and Productivity**
10:20 Break and poster viewing with authors present
10:50 **Session I: Wireless Technologies for the Future**
12:00 STA Business meeting and awards luncheon
1:00 Research Session
1330 **Session III: What Happened to the STA Anesthesia Machine Designs?**
2:15 **Session IV: Perioperative System Technology Part I**
3:15 Break
3:30 **Workshop Session I**
6:00 Welcome Reception with Exhibitors

Friday, January 16
07:00 Continental Breakfast with Exhibitors and Posters
08:00 **Joint Keynote Session with IMMS**
Mars: It's Closer Than You Think: Space Medicine Using Technology and Simulation
9:45 Technology Showcase and poster viewing
10:30 **Session V: Perioperative System Technology Part II**
11:30 Buffet lunch and working group sessions
5:00 STA Focus Group – Light Refreshments

7:00 **Buckaroo at the Bosque**

Saturday, January 17
07:00 Continental Breakfast with Exhibitors
08:00 **Session VI: Evolution of Anesthesia Equipment & Can we make the Future a Reality? Selling the Vision**
10:30 Technology Showcase
11:00 **Workshop Review III**
12:00 Adjourn meeting

Int'l Simulation Meeting
At a Glance

Thursday, January 15
6:00 Welcome Reception for both STA 2003 and 2003 IMMS

Friday, January 16
07:00 Continental Breakfast with Exhibits and Poster viewing
08:00 **Joint Session: STA 2002 and 2002 IMMS**
Mars: It's Closer Than You Think: Space Medicine Using Technology and Simulation
9:45 Technology Showcase in Exhibit Area
10:15 **General Session I Teaching, Learning & Testing**
12:00 Buffet Lunch and networking
1:45 **General Session II: Pediatric Simulation: New Devices, Differences & Pitfalls**
3:00 Technology Showcase, Posters & Demonstrations
3:15 **Workshops**: Registrants will be able to rotate through their choice of four workshops.

7:00 **MASH MESS Banquet**

Saturday, January 17
07:00 Continental Breakfast with Exhibitors and Poster Viewing
08:00 **General Session III: Future of Simulation: Virtual Reality, New Models & Other Disciplines**
09:30 **Themed Poster Presentations I** followed by at-poster viewing
09:30 **Technical Workshops**
11:00 **Themed Poster Presentations II** followed by at-poster viewing
12:30 **Buses Leave for UNM Workshops**: Registrants will be able to rotate through their choice of four workshops.

Sunday, January 18
07:00 Continental Breakfast
08:00 **General Session IV: Adult Simulation: New Fields, New Equipment, Model Programs**
11:00 **General Session V:** *Building the Community*
12:00 Adjourn meeting

Wear your nametag
Bring your tickets to all luncheons, banquet & workshop bus to UNM

Society for Technology in Anesthesia
PMB 300 223 N. Guadalupe
Santa Fe, NM 87501

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We would like to recognize our corporate members for 2003/4. These companies have made STA's educational and research activities possible.

Platinum

Datex Ohmeda Now part of G.E. Medical Systems
Draeger Medical
Masimo
Medical Education Technologies Inc.
Nellcor

Gold

Criticare Systems Inc.
Laerdal
Aspect Medical Systems

Silver

DocuSys
GASNet
Masimo Corp.
Medrad Inc.
Novametrix Medical Systems Inc.
Philips Medical Systems
PICIS

New Friends of STA

IngMar Medical
Clarus Medical

As of 123103

STA 2004 &
International Meeting on Medical Simulation
Exhibitor Information

Aspect Medical Systens

Aspect Medical Systems (NASDAQ: ASPM) was founded in 1987 to develop a technology to measure an unknown element of patient status: the effects of drugs and disease on the brain. In 1996 Aspect Medical Systems launched Bispectral Index (BIS®) technology – the first FDA cleared measure of anesthetic effects on the brain. Aspect Medical Systems has rapidly established itself as the global market leader. BIS technology has been used to assess more than 4 million patients and has been the subject of nearly 800 published articles and abstracts. It is currently in use in the ORs and ICUs of more than 50% of the world's best-ranked hospitals *(US News & World Report)* and is in more than 160 countries.

Clarus Medical

Shikani Optical Stylet™(**SOS**) a new, reusable, portable, high-resolution fiberoptic endoscope for difficult intubations. Adult (Endotracheal tubes≥5.5-mmID) and Pediatric (Endotracheal tube2.5-5.0-mmID) sizes.
The Flexible Airway Scope Tool™ (**FAST**)is used for visual confirmation or checking patency of ETtube placement as small as 4.0-mm ID, used to view and ventilate while positioning a LMA fastrach.

Criticare Systems, Inc.

CSI is committed to addressing the needs of a rapidly changing healthcare system by designing, manufacturing, and marketing cost-effective patient monitoring systems and noninvasive sensors – using proprietary technology – that reduce healthcare costs and improve patient management. The company's products address patient safety concerns and monitoring needs in anesthesia, critical care, respiratory care, transport, and outpatient care environments. Comprehensive customer support, economical rental ownership programs, prompt equipment service and technical support programs make even its most advanced systems affordable and consistently productive.

Datex-Ohmeda, Now part of GE Medical Systems

Datex-Ohmeda is a leading manufacturer of patient monitors, anesthesia delivery systems and supplies and accessories for anesthesia and critical care. Datex-Ohmeda will feature their System 5 product line. Datex-Ohmeda's vision is to help our customers improve the patient care management process through clinically superior and cost-efficient medical products and services. We are devoted to caring for life

GE Medical Systems *Information Technologies* provides healthcare systems with advanced software and technologies to improve their clinical performance. The Company's expertise spans the areas of cardiology, patient monitoring, image management, clinical communications, clinical information systems and Six Sigma-based management tools to enable a real-time, integrated electronic medical record. The recent acquisition of Data Critical further extends wireless and mobile patient monitoring capabilities.

DocuSys

DocuSys provides an Information System for Anesthesia requiring no keyboard entry. Unique is the ability to automatically document, bill and deliver injectable medications (in one motion) as a by-product of current clinical care, including the capability to warn clinicians of impending medication errors and other contraindications before administering medications

Draeger Medical

Draeger Medical, Inc. is a leader in design, engineering and manufacturing of Anesthesia Systems, Patient Monitors, Critical Care Systems as well as Information Management Systems. Draeger Medical has been a supporter of the Society for Technology in Anesthesia for many years and most recently participated in the ASA Breakfast panel presenting their newest technologies in a "Meet the Press" format.

Laerdal Medical Corporation

Dedicated to helping save lives, Laerdal provided products, services and system solutions for COR, BLS, and ACLS Training as well as a full line of Pre-Hospital products including Airway Management, Suction, Spinal Motion Restriction and Defibrillation. Laerdal is a major supporter of IMMS workshops providing equipment and services.

Masimo Corporation

Masimo Corporation is the innovator and leader of motion and low perfusion tolerant pulse oximetry. Over 70 independent and objective studies have demonstrated the superior performance of Masimo Signal Extraction Technology®. (Masimo SET™). Masimo licenses Masimo SET technology to over 35 patient monitoring companies representing 70% of the world's pulse oximetry shipments.

Medical Education Technologies Inc.

The METI Human Patient Simulator (HPS™) represents the latest in the state of the art simulation technology for training clinicians at all levels of medical education. Sophisticated mathematical models of human physiology and pharmacology determine automatically the patient's response to user actions and interventions. With dynamic coupling of the cardiovascular, pulmonary and pharmacological models along with the physical embodiment of the mannequin, the simulator allows for the complete characterization of the real patient. METI is a workshop supporter and provides generous support for the Gravenstein Technology Award and luncheon and the annual meeting banquet.

Medrad

Medrad, Inc. has been a major participant in Magnetic Resonance with accessory products for more than a decade. The continuum MR-Compatible Infusion System and the 9500 MR Patient Monitor are our two newest MR Acessories, designed to increase patient safety and standard of care in the MRI environment. Medrad has been named the 2003 Malcolm Baldridge award winner for performance excellence.

Nellcor: A Business Unit of Tyco Healthcare

Nellcor, a business of Tyco Healthcare, develops, manufactures and markets products that help diagnose, monitor, and treat respiratory and anesthesiology patients across the continuum of care. Nellcor is the world leader in pulse oximetry, and also offers a wide range of temperature and airway management solutions from names such as Shiley, DAR and Mallincrodt.

PICIS

Picis is the only healthcare IT vendor that solves your clinical and business needs with the simplicity of one total perioperative solution. Our award-winning software for anesthesia, operating room and critical care management has reached unparalleled maturity and is successfully implemented at more than 600 medical centers worldwide.

This information was provided by the exhibitor or taken from their website and received by December 31, 2003.

Abstracts by Submitting Author
STA 04 and IMMS

IMMS	**Clyne** Brian Brown Medical School *bclyne@lifespan.org*	*Oral Board vs High Fidelity Simulation for Competency Assessment: Senior Emergency Medicine Resident Management of an Acute Coronary Syndrome*
IMMS	**Cooper** Jeffrey Center for Medical Simulation *jcooper@partners.org*	*Team Training for Healthcare Administators Using Full Environment Simulation.*
IMMS	**Crowley** Ryan UCLA *rcrowley@mednet.ucla.edu*	*Using Full-Scale Patient Simulation to Assess Level of Anesthesia Training*
STA	**Dain** Steven University of Western Ontario *sdain@uwo.ca*	*Development of a Convenient Usable Handheld Acute Pain Service Information System*
IMMS	**Delson** Nathan University of CA SD *ndelson@ucsd.edu*	*A Quantitative Comparison of Experts and Novices Performing Laryngoscopy Using an Instrumented Laryngoscope*
STA	**Delson** Nathan University of CA SD *ndelson@ucsd.edu*	*Measurements from an Instrumented Laryngoscope*
IMMS	**DeVita** Michael University of Pittsburgh *devitam@msx.upmc.edu*	*Improving Medical Crisis TEAM Performance Using a Computerized Human Patient Simulator*
STA	**Dexter** Franklin University of Iowa *franklin-dexter@uiowa.edu*	*Forecasting Future Perioperative Workload for Each Specialty at a Hospital by Using Publicly Available Workload Data from Other Hospitals in the Region*
STA	**Dongilli** Thomas Wiser Institute *dongta@anes.upmc.edu*	*Improving a Multi-Hospital Health System: The Use of Human Simulation Training to Increase Patient Safety*
IMMS	**Dongilli** Thomas Wiser Institute *dongta@anes.upmc.edu*	*The Use of Simulation Training in a Large Multihospital Health System to Increase Patient Safety*
IMMS	**Ferguson** Sheena University of NM *sferguson@salud.unm.edu*	*A Unique and Original Use for a Full Body Human Simulator*
STA	**Fine** Peter UMDNJ Med. School *finepl@umdnj.edu*	*A Five-Month Neurosurgical Experience Using the Polestar N-10 MRI*
STA	**Fine** Peter UMDNJ Med. School *finepl@umdnj.edu*	*Operating Room Modifications for Neurosurgical Procedures Performed with Intraoperative MRI*
IMMS	**Flanagan** Brendan Southern Health Care Network *flanab@ozemail.com*	*Taking Trauma Scenario Based Learning and Simulation to the Rural Trauma Regions of Victoria, Australia - an Innovative Educational Platform*
IMMS	**Flin** Rhona Univ of Aberdeen *r.flin@abdn.ac.uk*	*Rating Observations of Surgeons' Non-Technical Skills*

STA	**Fox** Susan Univ of NM College of Nursing *sfox@salud.unm.edu*	*Simulated Patients in Interdisciplinary Education*
IMMS	**Garden** Alexander Children's Hospital Boston *alexander.garden@tch.harvard.edu*	*Crisis Resource Management Training with Teams from a Pediatric Cardiac Catheterization Laboratory*
IMMS	**Gardner** Roxane Brigham & Women's *obm d.gardner@worldnet.att.net*	*Rigorous Curriculum Development: Systematic Design Applied to a Labor and Delivery CRM Program*
IMMS	**Glassenberg** Raymond Northwestern University *rayglass@northwestern.edu*	*The Virtual Epidural*
IMMS	**Glavin** Ronnie Scottish Simulation Centre *simulator@svsc.co.uk*	*What does a Scotsman do with used ET Tubes?*
IMMS	**Goodrow** Mike University of Louisville *msgood02@louisville.edu*	*Does the Use of Patient Simulators Improve Student Understanding of Basic Science Concepts? A Preliminary Study*
IMMS	**Gordon** James Massachusetts General Hospital *jgordon3@partners.org*	*Assessment of a Clinical Performance Evaluation Tool for Use in a Simulator-Based Testing Environment: A Pilot Study*
IMMS	**Gould** Robert Northwestern University Med. School *rx2gould@att.net*	*Drug Dosage Errors Discovered During Advanced Cardiac Life Support (ACLS) Scenarios Utilizing a Human Patient Simulator.*
IMMS	**Gould** Robert Northwestern University Med. School *rx2gould@att.net*	*HPS as a Venue to Teach Novice Anesthesiology Residents Intraoperative Hemorrhagic Shock Management.*
IMMS	**Harrison** T. Kyle Palo Alto VA Stanford *kharrison@stanford.edu*	*The Use of Cognitive Aids in Simulated Anesthetic Crisis*
IMMS	**Hobbs** Gene Duke Medical Center *hobbs008@mc.duke.edu*	*Time Management and the Role of a Simulation Coordinator.*
IMMS	**Howes** Brendan UNC *brendan_howes@med.unc.edu*	*Comparison of the Pharmacokinetic Models of a Human Patient Simulator and an Independent Software Model: Implications for Scenario Scripting.*
IMMS	**Hunt** Elizabeth Johns Hopkins *doctorbetsy@yahoo.com*	*Simulation of Pediatric Cardiopulmonary Arrests: A report of 34 Mock Codes Performed Over a 40 Month Period Focused on Assessing Delays in Important Resuscitation Maneuvers and Types of Errors.*
IMMS	**Jones** Alan Bristol Education Centre *alan@simulationuk.com*	*Teaching Junior Clinical Dental Students to Manage Unpredicted Medical Emergencies with Help of a Human Patient Simulator*

IMMS	**Kaminoh** Yoshiroh Hyogo College of Medicine *ykaminoh@hyo-med.ac.jp*	*Effects of Sevoflurane on the Parameters Measured by NICO*
IMMS	**Kobayashi** Leo RIHMSC *lkobayashi@lifespan.org*	*High Fidelity Medical Simulation Enhances Housestaff Satisfaction with ACLS Certification and Recertification Training.*
IMMS	**Kozmenko** Valeriy LSZU Health Science *vkozme@lsuhsc.edu*	*Successful Use of the Human Patient Simulator in Interactive Clinical Bed-side Teaching of Junior and Senior Medical Students.*
IMMS	**Lighthall** Geoffrey Stanford University *geoffl@stanford.edu*	*Does CRM Training Change a House Staff's Perception of the Importance of Technical vs Non-technical Factors in the Management of Medical Emergencies*
STA	**Lutter** Norbert University of Erlangen-Nurenberg *Norbert.Lutter@kfa.imed.uni-erlangen.de*	*Viscosity Variations Strongly Influence Low-Flow Drug Administration*
STA	**Lutz** John Univ of Pittsburgh Wiser *lutzjw@anes.upmc.edu*	*The Integration of Performance Logs with Digital Video for Review of Simulation Training Sessions.*
STA	**Mahjan** Aman UCLA *amahjan@mednet.ucla.edu*	*Intraoperative Use of Forehead Reflectance Oximetry in Pediatric Patients.*
IMMS	**Mahoney** John Unifersity of Pittsburgh School of Medicine *mahoney@medschool.pitt.edu*	*Longitudinal Integration of Simulation Technology Throughout the Undergraduate Medical Cirriculum*
IMMS	**McIndoe** Andrew Bristol Simulation Centre *andrew.mcindoe@ubht.swest.nhs.uk*	*Does Learning on a Simulator Enhance Long-term Retention of Knowledge?*
IMMS	**McIvor** William Univ of Pittsburgh School of Medicine *mcivorwr@anes.upmc.edu*	*Determining the Static Lung Compliance of the Laerdal SimMan Simulator*
IMMS	**Meyer** Elaine Children's Hospital & Harvard Medical School *elaine.meyer@tch.harvard.edu*	*Anatomy of a Learning Team: Principles and Guidelines to Enhance Debriefings Following Communications Simulations.*
IMMS	**Meyer** Elaine Children's Hospital & Harvard Medical School *elaine.meyer@tch.harvard.edu*	*Difficult Conversations at End-of-Life: The Program to Enhance Relational and Communication Skills.*
IMMS	**Molyneux** Matthew Bristol Simulation Centre *matmol@doctors.net.uk*	*Continuous Auditory Monitoring. How Well Can We Estimate Absolute and Changing Heart Rates? Can This Be Improved?*

STA	**Murray** Bosseau The Pennsylvania State University H 187 *wbmurray@psu.edu*	*Enhancing the Safety of Ventilator Use by Improved Understanding of the Interaction between Ventilators and Patient Pulmonary Physiology in a Simulated Environment.*
IMMS	**Murray** Bosseau The Pennsylvania State University H 187 *wbmurray@psu.edu*	*Developing Consensus for Assessment in the Simulated Environment: A Proposed Method Using Airway Documentation*
IMMS	**Murray** David U Washington *murrayd@notes.wustl.edu*	*Generalizability Analysis: Determining the Efficacy of a Simulation-Based Evaluation of Resident Performance.*
IMMS	**Murray** David U Washington *murrayd@notes.wustl.edu*	*Management of Simulated Situations: Evaluating Resident and Student Nurse Anesthetist Acute Care Skills.*
IMMS	**Olufolabi** Adeyemi Duke University Medical Center *olufo001@mc.duke.edu*	*Promoting Trainee Experience: From the OR to the Simulator*
IMMS	**Pardo** Manuel UCSF *mpardo@itsa.ucsf.edu*	*A Randomized trial of Training New Anesthesia Residents in an Anesthesia Simulator Environment: Effect on Stress and Self-Efficacy Levels.*
IMMS	**Patey** Rona Aberdeen Royal Infirmary *Rona.Patey@arh.grampian.scot.nhs.uk*	*Usability of the ANTS System*
IMMS	**Pawlowski** John Beth Israel Deaconess *jpawlows@caregroup.harvard.edu*	*Use of the Human Patient Simulator to Teach Integrated Mammalian Physiology to Medical Students.*
IMMS	**Plante** Lauren University of NM School of Medicine *lplante@salud.unm.edu*	*The Use of a Simulator Lab in Promoting Interdisciplinary Communication.*
STA	**Poler** S. Mark Geisinger Clinic *m.poler@ieee.org*	*How Secure is Your Wireless Network?*
STA	**Poler** S. Mark Geisinger Clinic *m.poler@ieee.org*	*What Time Is It? The case for Synchronizing Clinical Times*
IMMS	**Preston** Paul Kaiser Hospital SF *paul.preston@kp.org*	*Simulation Training in Perinatal Safety*
IMMS	**Raemer** Daniel Center for Medical Simulation *draemer@partners.org*	*Diagnostic Problem Solving in the OR*
IMMS	**Raemer** Daniel Center for Medical Simulation *draemer@partners.org*	*Obstetrical Emergency - an Apparatus to Simulate Shoulder Dystocia*

STA	**Rafferty** Terence Yale University *rafferty@aya.yale.edu*	*EPA, FDA and OSHA Regulation of Transesophageal Echocardiography Probe Cleaning.*
STA	**Redford** Daniel University of Arizona *lorelei@email.arizona.edu*	*Evaluation of 2 Forehead Reflective Oximeters in Intraoperative Surgical Patients*
STA	**Rehman** Mohamed St. Christ. Hospital for Children *annette.silverman@tenethealth.org*	*Enhancing the Performance of Anesthesia Services by Implementing a Perioperative Information System Utilizing Tablet PCs*
IMMS	**Riley** Richard Royal Perth Hospital *richard@pobox.com*	*A "Regurgitating" Laryngeal Mask Airway for Scenario Training*
IMMS	**Ruhnau** Birgitte Danish Institute of Medical Simulation *ruhnau@rh.dk*	*Focus on Patient Safety Issues: Management of the Difficult Airway in a County Hospital - a Quality Improvement Project*
STA	**Sakaguchi** Farrant University of Utah *farrants@abl.med.utah.edu*	*Propofol-Remifentanil Response Surface Interaction Models in the Operating Room: An Observational Study*
IMMS	**Schaefer** Jon U of Pittsburgh *schaeferjj@anes.upmc.edu*	*Mandatory Competency-Based Difficult Airway Management Training at the University of Pittsburgh Department of Anesthesiology: Preliminary Findings*
IMMS	**Schaivone** Kathryn Univ of Maryland *schaivone@son.umaryland.edu*	*Blended Simulation: Expanded Competency Assessment Using Standardized Patients and Patient Simulators*
IMMS	**Shapiro** Marc Brown Medical School *mshapiro@lifespan.org*	*Use of Personal Protective Equipment (PPE) Does Not Impede Airway Management in an Environment Simulating a Chemical Weapons of Mass Destruction (WMD) Attack*
STA	**Shelley** Kirk Yale University *kirk.shelley@yale.edu*	*The Impact of Venous Pulsation on the Forehead Pulse Oximeter Waveform as a Possible Source of Error in Sp02 Calculation.*
IMMS	**Siddall** Viva Northwestern University *v_siddall@northwestern.edu*	*The Combination of a Human Patient Simulator and Traditional Lectures Results in a "Quick Think" Model for Anesthesiology Resident Education.*
IMMS	**Simon** Robert Center for Medical Simulation *rbtsimon@aol.com*	*Resuscitate or Do-Not-Resuscitate: Decision Making During a Crisis in a Simulated Environment*
IMMS	**Smith** N. Ty UCSD *tsmith@ucsd.edu*	*Body Simulation Enhancements, Including Chemical-Reaction Simulation of Cyanide Therapy*
IMMS	**Smith** Eric Am Institutes for Research *esmith@air.org*	*Usability Testing IV Infusion Pumps in a Simulated Intensive Care Unit*
STA	**Sorensen** Julie Dartmouth Hitchcock Medical Center *julie.a.sorensen@hitchcock.org*	*Pediatric Simulator Enhancements Improve Modeling of Apneic Event Physiology*

IMMS	**Spillane** Linda University of Rochester *linda_spillane@urmc.rochester.edu*	*Relationship Between Teamwork and Medical Management Ratings of Medical Students in a Simulator-Based Exercise*
IMMS	**Stanley** Liana Children's Hospital Boston *liana.stanley@tech.harvard.edu*	*The Development of a Critical Care Simulator Program at a Pediatric Teaching Institution*
IMMS	**Stanley** Liana Children's Hospital Boston *liana.stanley@tech.harvard.edu*	*What do Trainees Want in an End-of-Life Communication Simulation Program?*
STA	**Syroid** Noah University of Utah *nsyroid@medvis.com*	*A Graphical Comparison of Response Surface Models for Laryngoscopy: Volunteers vs Patients*
STA	**Syroid** Noah University of Utah *nsyroid@medvis.com*	*Demonstration: Web-deployed Intravenous Drug Display*
IMMS	**Takuhiro** Kitoji Nippon Med. School Chiba Hokuso Hospital *takuhiro@nms.ac.jp*	*Development of a Mobile Simulation Stretcher for On-site, Hands-on, Simulation Training to Improve Patient Safety*
STA	**Tamai** Doris Yale University *dortam@hotmail.com*	*Can an Easy, New p50 Analysis Method Predict a Failing Left Ventricular Assist Device (LVAD)?*
IMMS	**Uchida** Osamu National Cardiovascular Ctr. *uchida@hsp.ncvc.go.jp*	*A Report of the First Anesthesia Simulator Scenario Competition*
IMMS	**Vallebo** Nini Danish Institute of Medical Simulation *niva@herlevhosp.kbhamt.dk*	*Trauma Team Training: Simulation Based Training in Trauma Care with Emphasis on the Importance of Teamwork and Crisis Resource Management Principles*
STA	**Wachter** Blake Univ of Utah *drw@ee.utah.edu*	*Development of a Graphical Pulmonary Display*
IMMS	**Wade** Kenneth Wake Forest University Baptist Medical Center *kwade@fubmc.edu*	*A Simulation Trial of Fiberoptic Assisted Coaxial Endotracheal Tube Exchange (FACETTE)*
STA	**Wallroth** Carl Drager *beate.moeller@draeger.com*	*Evaluating the Safety and Efficacy of Closed Loop Controllers*
IMMS	**Warriner** Renee University of Ottawa Heart *renee.warriner@worldheart.com*	*Severe Acute Respiratory Syndrome (SARS) Training Using the Human Patient Simulator*
IMMS	**Wax** Randy Critical Care Medicine Univ of Toronto *randy.wax@utoronto.ca*	*Using Simulation to Battle SARS: Development of Protocols to Protect Health Care Workers During High-Risk Procedures in SARS Patients During the Toronto Outbreak*

STA	**Weinger** Matthew B. VA Medical Center *mweinger@UCSD.edu*	*Pilot Study of the Measurement of Context-Dependent Concept Relatedness to Assess Anesthesiology Expertise*
STA	**Weininger** Sandy US FDA/CDRH/OST *sxw@cdrh.fda.gov*	*Using the Infrared (IR) Plethysmogram to Assess the Effects of Motion on the Performance of Pulse Oximeters*
IMMS	**Wilford** Amanda Bristol Medical Simulation Centre *amanda.wilford@ubht.swest.nhs.uk*	*HELP: a One-Day Interprofessional Course*
IMMS	**Wilks** David Univ New Mexico *dwilks@salud.unm.edu*	*Simulation Curriculum for Fourth Year Medical Students.*
IMMS	**Wilson** Michael Southern Health *m.wilson@southernhealth.org.au*	*Development of Educationally Prepared Facilitators for High Fidelity Patient Simulation Programs*
IMMS	**Wilson** Michael Southern Health *m.wilson@southernhealth.org.au*	*Assessment of Low-Fidelity Mannikins for Developing Nursing Skill Acquisition.*
IMMS	**Woodall** Eva University Hospital Dept. Clinical Education *ewoodall@salud.unm.edu*	*Cojoint Use of a Written Self-Study Module and Human Simulation to Evaluate Nurse Competence*
IMMS	**Wynn** Phillip Carver School of Medicine *phillip-wynn@uiowa.edu*	*Simulation of Hemodynamic Parameters Following Aortic Unclamping With and Without Phenylephrine Support.*
STA	**Young** Christopher Yale University *cmchyoung@sbcglobal.net*	*A Better Mousetrap? Evaluation of the User Interface, Complications and Efficacy of the Shikani Optical Stylet for Orotracheal Intubation*
STA	**Zhu** Qing-Bing Yale University *qzhu1@yahoo.com*	*A Novel Method for Measuring Total Coronary Blood Flow and Myocardial Oxygen Consumption.*
IMMS	**Ziv** Amitai Israel Center for Medical Simulation *zamitai@post.tau.ac.il*	*National Comprenensive Interdisciplinary, Multimodality, the Medical Simulation Center: The Israeli Model and Experience*

STA 2004:
Planning for the
Perioperative Environment of the Future

January 14-17, 2004

Hyatt Tamaya Resort, Albuquerque/Santa Fe

Wednesday, January 14, 2004

10:00 – 3:00	**Meeting of the STA Board of Directors**
2:00 – 4:00	**Early registration**

Thursday, January 15, 2004

7:00 – 8:00	**Continental Breakfast**
8:00 – 8:10	**Opening Remarks** **Julian M. Goldman, Massachusetts General Hospital, STA Course Director**
8:10 – 8:50	**Keynote Address: Federal Goals of Perioperative Systems of the Future** **Ronald Marchessault, Jr., Sr. Project Manager, Clinical Applications Division, US Army Medical Research and Materiel Command, Telemedicine and Advanced Technology Research Center (TATRC)**
8:50 – 10:00	**General Session I** Moderator: Franklin Dexter, University of Iowa • **OR Workflow and Productivty: Myths and Goals:** Warren Sandburg, Massachusetts General Hospital, Boston, MA
10:00 – 10:30	**Research Session I: Posterside discussions**
10:30-12:00	**General Session II** Moderator: Jeffrey M. Feldman, Drexel University • **Wireless Design & Business Re-Engineering:** David Hoglund, Integra Systems, San Diego, CA • **Bluetooth Wireless Technology:** Bill Saltzstein, Code Blue Communications, Seattle, WA
12:00 – 1:10	**STA Annual Awards and Business Luncheon** **Presentation of the J. S. Gravenstein Technology Award** *Awards Luncheon and STA Annual Technology Award supported by METI*
1:10 – 2:10	**Research Session II: Oral presentations**
2:10 – 2:40	**General Session III** Moderator: Jerry Calkins, University of Arizona/Mayo School of Medicine • **Whatever Happened to the STA 1992 Anesthesia Machine Designs?**
2:40 - 3:20	**General Session IV** **What's Next in Perioperative Systems Technology Part I*** • The GEMS Perspective (Imaging, Surgery, Anesthesia Monitors), George Hutchinson, MSEE, GEMS IT • Patient transport and surgical system integration, William Burke, Getinge Castle • Applications of Indoor Positioning Systems, Michael Dempsey, Radianse, Inc.
3:20 – 3:45	**Break and Poster Viewing**

Updated January 4, 2004

3:45 – 5:00	**Workshop Session I** Workshop Chair: Robert Tham, STA BOD, GE Medical Systems • **Workgroup Formation and Introduction of Facilitators** • **Future Perioperative Paradigms** • **Experiencing the Home-to-Home Perioperative Paradigm**
5:30	**Focus Group ****
7:00	**Welcome Reception in Technology Showcase area**

Friday, January 16, 2004

7:00 – 8:00	**Continental Breakfast in Technology Showcase Area**
8:00 – 9:15	**Joint Session with International Meeting on Medical Simulation** • **Mars – it's closer than you think: Space Medicine using Technology, Simulation and Ideas for the Future**
9:15 – 9:45	Introduction to the American Society for Medical Simulation
9:45 – 10:15	Technology Showcase; Posters and Demonstrations
10:15 – 11:30	**General Session V** What's Next in Perioperative Systems Technology Part II* • Human Factors Considerations: Peter Carstensen • Plug-and-Play for Perioperative Systems Technology, William Seitz, CAN in Automation • Smart Devices and Intelligent Software, Martin D. Wells, Granite Peak Technology,Inc. • Planning to be a High Reliability Organization: David Gaba &/or Jeff Cooper
11:30 – 11:50	**Workshop Session II** • **Group Reports: Views from the Stakeholders**
12:00 – 3:00	**Workgroup: working lunch**
3:00 – 3:15	**Technology Showcase; Posters and Demonstrations**
3:00 – 5:00	**Local activities on your own**
5:00	**Focus Group ****
7:00 – ?	**Buckaroo at the Bosque – a southwestern party down by the Rio Grande** *STA/IMMS Annual Banquet generously supported by METI*

Saturday, January 17, 2004

7:00 – 8:00	**Continental Breakfast in Technology Showcase Area**
8:00 – 8:30	**General Session VI** • **Evolution in Anesthesia Equipment** James Szocik, University of Michigan
8:30 – 10:30	• **Can we make the Future a Reality? Selling the Vision:** Julian Goldman
10:30 – 11:00	**Break**
11:00 – 12:00	**Workshop Review III** • **What's Next? For Technology – For STA?**
12:00	**Adjourn**

As of December 29, 2003

Research Poster Timetable

Posters Put up	**Wednesday, January 14**	**2:00 – 4:00 pm**
	or Thursday, January 15	**before 7:00 am**

Authors will be in attendance with their posters during the following times:

Thursday, January 15	**10:00 – 10:30 am**	**3:20 – 3:45 pm**
Friday, January 16	**7:00 – 8:00 am**	**10:00 – 10:30 am**
	Friday, January 16	**10:30 – 11:00 am**
Posters Taken down		

* Industry representatives will fully disclose their associations with their company and the technology they represent.

** Focus Groups are sessions presented by STA Corporate Members who wish to have in-depth discussions with small groups regarding their technology, equipment. No CME is offered for these sessions. All registrants are invited.

As of December 29, 2003

2004 STA Abstracts

Those marked "demo" are located in the demonstration area of the poster room.

1 demo
Young Christopher
Yale University
cmchyoung@sbcglobal.net
A Better Mousetrap? Evaluation of the User Interface, Complications and Efficacy of the Shikani Optical Stylet for Orotracheal Intubation

2
Weininger Sandy
US FDA/CDRH/OST
sxw@cdrh.fda.gov
Using the Infared (IR) Plethysmogram to Assess the Effects of Motion on the Performance of Pulse Oximeters

3
Loeb Butch
Arizona Health Sciences Center
RLoeb@U.arizona.edu
8500 Poet IQ - An Accurate Anesthesia Gas Monitor?

4
Loeb Butch
Arizona Health Sciences Center
RLoeb@U.arizona.edu
Anesthesia Breathing Circuit Efficiency

5
Rehman Mohamed
St. Christ. Hospital for Children
annette.silverman@tenethealth.org
Enhancing the Performance of Anesthesia Services by Implementing a Perioperative Information System Utilizing Tablet PCs

6
Lutz John
Univ of Pittsburgh Wiser
lutzjw@anes.upmc.edu
The Integration of Performance Logs with Digital Video for Review of Simulation Training Sessions.

7
Fox Susan
Univ of NM College of Nursing
sfox@salud.unm.edu
Simulated Patients in Inteerdisciplinary Education

8
Barker Steven J.
University of Arizona
sjbarker@u.arizona.edu
A Laboratory Comparison of the Newest "Motion Resistant" Pulse Oximeters During Motion and Hypoxemia.

9
Dongilli Thomas
Wiser Institute
dongta@anes.upmc.edu
Improving a Multi-Hospital Health System: The Use of Human Simulation Training to Increase Patient Safety

10
Zhu Qing-Bing
Yale University
qzhu1@yahoo.com
A Novel Method for Measuring Total Coronary Blood Flow and Myocardial Oxygen Consumption.

11
Fine Peter
UMDNJ Med. School
finepl@umdnj.edu
Operating Room Modifications for Neurosurgical Procedures Performed with Intraoperative MRI

12	**Fine** Peter UMDNJ Med. School *finepl@umdnj.edu*	*A Five-Month Neurosurgical Experience Using the Polestar N-10 MRI*
13	**Tamai** Doris Yale University *dortam@hotmail.com*	*Can an Easy, New p50 Analysis Method Predict a Failing Left Ventricular Assist Device (LVAD)?*
14	**Amaki** Yoshikiyo Jikei Univ School of Medicine *joamaki@nifty.com*	*A Center in Tokyo from which Simulators can be Rented*
15	**Dexter** Franklin University of Iowa *franklin-dexter@uiowa.edu*	*Forecasting Future Perioperative Workload for Each Specialty at a Hospital by Using Publicly Available Workload Data from Other Hospitals in the Region*
16	**Mahjan** Aman UCLA *amahjan@mednet.ucla.edu*	*Intraoperative Use of Forehead Reflectance Oximetry in Pediatric Patients.*
17 *demo*	**Poler** S. Mark Geisinger Clinic *m.poler@ieee.org*	*How Secure is Your Wireless Network?*
18	**Ansermino** Mark BC Children's Hospital *anserminos@yahoo.ca*	*Increased Tidal Volume Variability as a Marker of Opiod-Induced Respiratory Depression in Children*
19	**Redford** Daniel University of Arizona *lorelei@email.arizona.edu*	*Evaluation of 2 Forehead Reflective Oximeters in Intraoperative Surgical Patients*
wbmurray.pdf 20	**Murray** Bosseau The Pennsylvania State University H 187 *wbmurray@psu.edu*	*Enhancing the Safety of Ventilator Use by Improved Understanding of the Interaction between Ventilators and Patient Pulmonary Physiology in a Simulated Environment.*
21	**Sorensen** Julie Dartmouth Hitchcock Medical Center *julie.a.sorensen@hitchcock.org*	*Pediatric Simulator Enhancements Improve Modeling of Apneic Event Physiology*
22	**Lutter** Norbert University of Erlangen-Nurenberg *Norbert.Lutter@kfa.imed.uni-erlangen.de*	*Viscosity Variations Strongly Influence Low-Flow Drug Administration*
23 *demo*	**Dain** Steven University of Western Ontario *sdain@uwo.ca*	*Development of a Convenient Usable Handheld Acute Pain Service Information System*

ashley.pdf

24 **Ashley** Sharon
Charles Drew Univ of Medicine
ashley@dhs.co.la.ca.us

Fiberoptic Laryngoscopy/Bronchoscopy using a Simulator for Credentialling and Future Benchmarking

25 *demo* **Wachter** Blake
Univ of Utah
drw@ee.utah.edu

Development of a Graphical Pulmonary Display

26 *demo* **Syroid** Noah
University of Utah
nsyroid@medvis.com

Demonstration: Web-deployed Intravenous Drug Display

27 **Syroid** Noah
University of Utah
nsyroid@medvis.com

A Graphical Comparison of Response Surface Models for Laryngoscopy: Volunteers vs Patients

28 **Sakaguchi** Farrant
University of Utah
farrants@abl.med.utah.edu

Propofol-Remifentanil Response Surface Interaction Models in the Operating Room: An Observational Study

29 **Weinger** Matthew B.
VA Medical Center
mweinger@UCSD.edu

Pilot Study of the Measurement of Context-Dependent Concept Relatedness to Assess Anesthesiology Expertise

30 **Shelley** Kirk
Yale University
kirk.shelley@yale.edu

The Impate of Venous Pulsation on the Forehead Pulse Oximeter Waveform as a Possible Source of Error in Sp02 Calculation.

31 **Delson** Nathan
University of CA SD
ndelson@ucsd.edu

Measurements from an Instrumented Laryngoscope

32 **Goldman** Jullian
Mass General Hospital
julian@acmeanesthesia.com

Automatic Identification of the "Start of Anesthesia Care" Using Indoor Positioning System (IPS) Spatial-Temporal Association

33 **Poler** S. Mark
Geisinger Clinic
m.poler@ieee.org

What Time Is It? The case for Synchronizing Clinical Times

34 **Rafferty** Terence
Yale University
rafferty@aya.yale.edu

EPA, FDA and OSHA Regulation of Transesophageal Echocardiography Probe Cleaning.

35 **Ahn** Wonsik
Seoul Univ Hospital
aws@snu.ac.kr

Possible Application of the Cardiogenic Oscillations to Evaluate a Cardiopulmonary Status or Ventilation Adequacy in Pediatric Patients

albert.pdf

36 **Albert** Robert
Univ of Utah Dept of Psychology
robert.albert@psych.utah.edu

Validating the Utility of a Cardiovascular Visualization in Simulated Surgeries

37 **Wallroth** Carl
Drager
beate.moeller@draeger.com

Evaluating the Safety and Efficacy of Closed Loop Controllers