

Curriculum Vitae

JOSEPH HILARY McISAAC III, MD, MS

CIVILIAN CAREER

Present Employment

**Chief of Trauma Anesthesia
Chief of Urologic Anesthesia**

Partner and Director , Hartford Anesthesiology Associates, Inc.
111 Founders Plaza, Suite 300
East Hartford, CT 06108

Phone: 860-545-2117
FAX: 860-545-1784
Cellular: 860-930-9831
Alternate
Cellular: 1-347-826-4919

Founder, CEO, and Director of Research and Development

Mountain Laurel Biomedical, LLC
52 Northington Drive
Avon, CT 06001
www.MountainLaurelBiomed.com

Civilian Education

Rensselaer at Hartford
(Hartford Graduate Center)
Hartford, CT

Degree, Year

**MS, Biomedical
Engineering, 1997**

Residency in Anesthesiology

Hartford Hospital
Hartford, CT

1989

Subspecialties:

Cardiovascular and Thoracic Anesthesia, Pediatric Anesthesia, Urologic
Anesthesia

Transitional Residency (Internship)

Hartford Hospital
Hartford, CT

1986

**University of Connecticut School of
Medicine**

Farmington, CT

MD, 1985

Case Western Reserve University

Cleveland, OH

BA, cum laude, Chemistry,
with Departmental Honors in
Chemistry. Minors: Biology
and Psychology, **1981**

Areas of Expertise and Interest

Biomedical Engineering

Biological heat transfer- a commercial product is in clinical trials
Neuro-physiological monitoring during surgery (Evoked Potentials, EEG, BIS, Infra-red)
Functional medical imaging (Ultrasound, Infra-red, Laser, Radiofrequency, Microwave, MRI)
Electromagnetic interference and compatibility of medical devices (EMI/EMC)
Cardiac and vascular fluid mechanics
Biomedical signal processing- advanced stethoscope prototype being tested
Virtual instrument design for medical applications- anesthesia information system design
 Biological interactions with electromagnetic radiation
Industrial espionage prevention/counterintelligence
Undergraduate and pre-college science and engineering education
Mathematical modeling and control of physiologic systems

Medical

Management of Nuclear, Chemical, and Biological Casualties
Decontamination and personal protection
Disaster medicine and preparedness
Public health and population based disease prevention
Medical simulation training
 Cardiac anesthesia
Echocardiography
Pediatric anesthesia
Bleeding disorders during surgery
Brain protection during surgery
Perioperative temperature management
 Trauma resuscitation
Urologic anesthesia

Military

Nuclear, Chemical, and Biological Warfare Defense
 Electromagnetic pulse protection
Electronic warfare defense
Antenna design—stealthy, reconfigurable, and plasma based antennas
Intelligence
Communications Technology
Force and infrastructure protection

Research Experience

2009 Seizure Simulation Device for the Laerdal SimMan[®] (Trinity
 College students won Travelers Award for best Senior Project)
2006-2009 Novel Operating Room Positioning Device (patent application in progress)

- 2003-2009 Non-invasive intra-operative Temperature Measurement (Brain Temperature Tunnel)
Handheld Echocardiography for Orthopedic Surgery
- 2000-2009 Virtual Instrumentation for Anesthesia Using National Instruments LabView®
-Enhanced Esophageal Stethoscope With Signal Processing
-Automated Anesthesia Control System
- 1999-2009 Intra-operative Heat Transfer Device (10th stage commercial device in clinical trials in collaboration with Hamilton Sundstrand and Hartford Hospital- US Patents #6,349,412, February 26, 2002; #6,547,862, April 15, 2003.)
Neurological Biosignal Analysis During Anesthesia (Evoked Potentials, EEG, BIS)
Electromagnetic Compatibility of Cellular Telephones and Anesthesia Equipment
- 2000-2002 Plasma Antennas
- 1996-1997 Medical Radar Design for Body Imaging
Anesthesia Personnel Exposure to Radio-frequency.
Electromagnetic Fields.
Anesthesia Personnel Exposure to Extremely Low Frequency
Electromagnetic Fields.
- 1995-1999 Vascular Impedance Measurements and Higher Order Modeling of the Cardiovascular System Using Impulse Response Methods
- 1993-1996 Electromagnetic Interference to Anesthesia Devices.
- 1992-1995 Analysis of Blood Coagulation During Radical Retropubic Prostatectomy Using the Thromboelastograph.
- 1992 Participating Investigator, Burroughs-Wellcome Mivacron® Study.
- 1990-1991 Pilot Study to determine clinical utility of Sonoclot® Coagulation Analyzer in diagnosing post-cardiopulmonary bypass coagulopathy.
- 1987-1990 Designed and implemented retrospective study of the effects of anesthetics and blood loss in surgery. (The Effect of Anesthetic Type and on Blood Loss and Hospital Length of Stay in Radical Retropubic Prostatectomy, *Anesthesiology*, Supp., September 1989, abstract.)
- 1979-1981 Laboratory Synthesis and characterization of conducting organo-metallic polymers with the goal of developing room-temperature superconductors. (Thesis: *Aluminosiloxy- and Siloxy-Phthalocyanine Oligomers*, Case Western Reserve University, 1981.)

Research Grants Awarded

- 2003-2005 \$100,000, Hartford Hospital Medical Staff Executive Committee, Clinical Research Award.
- 2004 \$6000, Hartford Anesthesiology Associates, Inc., Electronic Esophageal Stethoscope Study.

- 2003-2005 \$54,000, Hartford Hospital Research Endowment Fund, Surgical Cooling Garment Study.
- 2002 \$4000, Hartford Anesthesiology Associates, Inc., Electronic Esophageal Stethoscope Study.

Consulting Experience

- 2009 Dr. Yungsi Fei, University of Connecticut. *Vulnerability of medical devices to side-channel attacks.*
- 2007 GE Medical, *Confidentiality agreement in effect.*
- 2007 Ahlstrom Corporation, *Non-woven fabric for temperature regulation in a medical/surgical environment. Physical analysis, market considerations, competing and complementary technologies, alternative markets.*
- 2006 Appleton and Appleton, Attorneys at Law, Hartford, CT, *Medical case review and consultation.*
- 2006 Aspect Medical, Inc., *Confidentiality agreement in effect.*
- 2006 Maquet, Inc., *Confidentiality agreement in effect.*
- 2006 Cramer, Inc., *online education RFP submission.*
- 2006-2007 Blue Back Square Ambulatory Surgery Center, West Hartford, CT, *Anesthesia Department start-up planning.*
- 2005 Design By Analysis, Inc., *SBIR submission for a novel medical device.*
- 2004-2005 Z-Medica, Inc., *QuickClot™*
- 2002 Hamilton Sundstrand, Inc., *Regenerable CO2 Systems.*
- 2002 Dr. Linda Gillam, Hartford Hospital, *Tricuspid Valve Regurgitation Study.*
- 1999-2002 Dr. Theodore Anderson, *Plasma Antennas.*
- 1999 Hartford Hospital, Department of Biomedical Engineering. *Electromagnetic interference of cellular telephones in the operating room and critical care areas. Electric field measurements and immunity standards.*
- 1999 Dr. Quing Zhu, University of Connecticut. *Design and application of combined ultrasound, infrared imaging device for breast tumor diagnosis.*
- 1998 Dr. Quing Zhu, University of Connecticut. *Design of flexible, phased array ultrasound transducers for vascular studies.*
- 1998 Dr. Jill Peters, Women's Health Connecticut. *Urinary incontinence therapy device. Patent Pending.*
- 1998 Kendall Corporation. *Endotracheal tube design.*
- 1998 The Martek Group. *Noninvasive cardiac output monitor.*
- 1998 Novamatrix, Inc. *Noninvasive cardiac output monitors.*
- 1997 Department of Public Health, State of Connecticut. *Case reviewer for standard of care issues in anesthesiology.*
- 1995 Abbott, Inc. *Confidentiality agreement in effect.*
- 1993 Ohmeda, Inc. *Usability of anesthesia machine software. Design of cardiac monitors.*
- Nazlo, Inc. and Black Belt Systems, Inc. *Communications software beta-testing and design. Confidentiality agreement in effect.*

Publications

BOOKS

McIsaac, JH, Editor, **Hospital Preparation for Bioterror: A Medical and Biomedical Systems Approach**, Academic Press, October 2006.

CHAPTERS

McIsaac, JH, Editor, Chapter on Emergency Preparedness in **Manual for Anesthesia Department Organization and Management**, American Society of Anesthesiologists, web publication, 2009.

McIsaac, JH, Hospital Preparation for Disasters, in Rosenblatt, MA, Editor, **ASA Refresher Courses in Anesthesiology, 2008** Volume 36, Lippincott Williams & Wilkins, September, 2008.

McIsaac, JH, Decontamination and Personal Protection, in McIsaac, JH, Editor, **Hospital Preparation for Bioterror: A Medical and Biomedical Systems Approach**, Academic Press, October 2006.

McIsaac, JH, Operating Room Preparation for Mass Casualties, in McIsaac, JH, Editor, **Hospital Preparation for Bioterror: A Medical and Biomedical Systems Approach**, Academic Press, October 2006.

McIsaac, JH, Electromagnetic Interference, in McIsaac, JH, Editor, **Hospital Preparation for Bioterror: A Medical and Biomedical Systems Approach**, Academic Press, October 2006.

PAPERS

Dean, WC, Hodgson, E, McIsaac, JH, **Liquid Cooling Garment Adaptation to Enhance Surgical Outcomes**. Presented at the International Conference On Environmental Systems, Society of Automotive Engineers International, (#2003-01-2339), July 2003, Vancouver, BC, Canada.

EDITORIALS

McIsaac, JH, **Be Afraid of the Dark: Technological Challenges for the Anesthesiologist in the 21st Century**, Guest Editorial, *Anesthesiology News*, McMahon Publishing Group, 35:3, March, 2009.

BOOK REVIEWS

McIsaac, JH, **Jihad and American Medicine: Thinking Like a Terrorist to Anticipate Attacks Via Our Health System**, *Journal of the American Medical Association*, 300(6):734-735, August 13, 2008.

McISAAC, JH, **Basics of Blood Management**, *Journal of the American Medical Association*, 298(21):2547-2548, December 5, 2007.

ABSTRACTS

McIsaac, JH, **Technological Challenges to Medical Practice in the 21st Century**, Abstract, *Prehospital and Disaster Medicine*, 2009;24(2):s101. Presented at the World Congress on Disaster and Emergency Medicine, Victoria, BC, Canada, May 12, 2009.

McIsaac, JH, Kiraly, A, Smolka, A, Renouf, R, **Intraoperative Temperature Measurement Error**, *Anesthesiology*, Supp., September, 2006, abstract. Presented at the Annual Meeting of the American Society of Anesthesiologists, Chicago, IL, October 14, 2006.

McIsaac, JH, Kiraly, A, Blum, J, **The Surgical Cooling Garment**, Abstract. Presented at the MEDi2005 Conference and Exhibition, Hartford, CT, October 26, 2005

McIsaac, JH, Blum, J, **The Brain Temperature Tunnel**, Abstract. Presented at the MEDi2005 Conference and Exhibition, Hartford, CT, October 26, 2005.

McIsaac, JH, Bowers, M, **The Electronic Esophageal Stethoscope**, Abstract. Presented at the MEDi2005 Conference and Exhibition, Hartford, CT, October, 26, 2005.

Blum, J, McIsaac, JH, Fernandez, A, Palter M, **The Brain Temperature Tunnel: A Non-invasive Technique for Monitoring Core Temperature**, abstract. Presented at Advances in Medical Technology: Bionanotechnology, The Seventh Annual BEACON Symposium and Technology Fair, Hartford Hospital, Hartford, CT, October 28, 2004.

McIsaac, JH, Blum, J, Hodgson, E, Dean, WC, **Surgical Cooling Garment: Phase III**, abstract. Presented at Advances in Medical Technology: Bionanotechnology, The Seventh Annual BEACON Symposium and Technology Fair, Hartford Hospital, Hartford, CT, October 28, 2004.

McIsaac, JH, Bowers, M, Chen, S, Kaputa, D, **The Electronic Esophageal Stethoscope**. Presented at Advances in Medical Technology: Bionanotechnology, The Seventh Annual BEACON Symposium and Technology Fair, Hartford Hospital, Hartford, CT, October 28, 2004.

Blum, J, McIsaac, JH, **The Brain Temperature Tunnel: A Non-invasive Technique for Monitoring Core Temperature**, abstract. Presented at the 13th World Congress of Anesthesiologists, Paris, France, April 22, 2004.

Burns-Lambert, R, McIsaac, JH, **Fluid Flow Reduction During Rapid Transfusion Using The CLAVETM Connector**, abstract. Presented at Advances in Medical Technology: Neural Engineering, The Sixth Annual BEACON Symposium and Technology Fair, Hartford Hospital, Hartford, CT, October 22, 2003.

Burns-Lambert, R, McIsaac, JH, **Fluid Flow Reduction During Rapid Transfusion Using The CLAVETM Connector**, *Anesthesiology*, Supp., September, 2003, abstract.

Presented at the Annual Meeting of the American Society of Anesthesiologists, San Francisco, CA, October 14, 2003.

Hook, K, Nelson, J, McIsaac, JH, **Virtual Instruments for Anesthesia Monitoring**, abstract, presented at the BEACON Technology Fair, Hartford, CT, October 12, 2001.

Nugent, J, Hook, K, McIsaac, JH, **Enhanced Electronic Esophageal Stethoscope**, abstract, presented at the BEACON Technology Fair, Hartford, CT, October 12, 2001.

Gross, J, McIsaac, JH, **Electromagnetic Compatibility of Cellular Telephones and Anesthesia Equipment**, Panel on Technology, Presented at the American Society of Anesthesiologists Annual Meeting, Dallas, TX, October 11, 1999.

McIsaac, JH, **Electromagnetic Fields in the Operating Room**, *Anesthesiology*, Supp., September, 1998, abstract. Presented at the American Society of Anesthesiologists Annual Meeting, Orlando, FL, October 21, 1998.

McIsaac, JH, Rouman, JC, Graydon, RJ, **The Effect of Anesthetic Type on Blood Loss and Hospital Length of Stay in Radical Retropubic Prostatectomy**, *Anesthesiology*, Supp., September, 1989, abstract. Presented at the Annual Meeting of the American Society of Anesthesiologists, New Orleans, LA, October 18, 1989.

Lectures

Anesthesia for Mediastinal Masses

Bispectral Analysis: Functional Intra-operative Neurological Monitoring

Anesthesia for Radical Retropubic Prostatectomy

The Vascular Effects of General Anesthetics

Advanced Hemodynamics: A New Model of Vascular Mechanics

Diagnosis and Treatment of Post Cardiopulmonary Coagulopathy

Coagulation Issues in Cardiac Surgery

The Physics of Transesophageal Echocardiography

Color Doppler Transesophageal Echocardiography

Heparin Bonded Extracorporeal Circuits for Cardiopulmonary Bypass

Anesthesia for Burns

Medical Operations in Cold Weather

Medical Operations in a Desert Environment

Biological Warfare Threat Assessment

Chemical Warfare Threat Assessment

Medical Threat: Task Force DIRIGO (Guatemala)

Lectures, Presentations, Exercises, and Scientific Exhibits by Invitation

“Technological Challenges for Hospitals During NBC Disasters (HEMP and Cyberwarfare),” 2009 International Disaster Management Conference, Orlando, FL, February 21, 2009.

“Hospital Preparedness for Bioterror,” 2009 International Disaster Management Conference, Orlando, FL, February 21, 2009.

“Management of Bleeding After Cardiac Surgery”
Residency in Anesthesiology
Department of Anesthesiology
University of Connecticut School of Medicine
Hartford, CT, January 19, 2009

“Vascular Mechanics: Advanced Models”
Residency in Anesthesiology
Department of Anesthesiology
University of Connecticut School of Medicine
Hartford, CT, January 19, 2009

Exercise Evaluator
“Hartford Hospital Emergency Department: Mass Casualty Incident: A Tabletop Disaster Drill”
Grand Rounds, Department of Emergency Medicine
Hartford, CT, January 15, 2009

“Hospital Preparation for Bioterror and Disasters”
Presented at the Annual Meeting of the New England Section of the American Association of Operating Room Nurses
January 13, 2009

Exercise Controller
“Hospital Incident Command Center Practical Exercise”
Hartford Hospital, Hartford, CT, November 7, 2008

“The Home Front: Technological Challenges for the Anesthesiologist,”
Presented at the American Society of Anesthesiologists Annual Meeting, Orlando, FL,
October 19, 2008.

“Medical Device Research and Development in Anesthesiology at Hartford Hospital.”
Presented at Medi2008, Medical Technology Conference and Exhibition,
The Connecticut Convention Center, Hartford, CT, September 9-10, 2008

“Hospital Preparation for Nuclear, Chemical, and Biological Disasters”
Grand Rounds, Department of Anesthesiology
University of Texas at Houston
Houston, Texas, February 28, 2008

“Electromagnetic Pulse, Communications, and Power Considerations for Medical Personnel”

Visiting Professor Resident Lecture
University of Texas at Houston
Houston, Texas, February 28, 2008

“Teaching NBC Casualty Management in Estonia—2007”

Multidisciplinary Trauma Committee
Hartford Hospital, Hartford, CT, February 13, 2008

“Teaching NBC Casualty Management in Estonia—2007”

Biomedical Engineering Alliance and Consortium (BEACON)
Hartford, CT, January 23, 2008

“Teaching NBC Casualty Management in Estonia—2007”

Grand Rounds, Department of Anesthesiology
Hartford Hospital, Hartford, CT, January 17, 2008

“Hospital Preparation for Nuclear, Chemical, and Biological Disasters”

Annual National Military Medical Meeting
Estonian National Defence College
Tartu, Estonia, December 6, 2007

Conference Organizer for the Seminar on Nuclear, Biological, Chemical Defense, and Simulation

Estonian National Defence College
Tartu, Estonia, December 3-5, 2007

Presentations:

“Decontamination and PPE”

“Electromagnetic Pulse, Communications, and Power Considerations for Medical Personnel”

“Hospital Preparation for Nuclear, Chemical, and Biological Disasters”

“Medical Management of Nerve Agent Casualties”

“Medical Management of Vesicant Casualties”

Simulation stations:

“Advanced Airway Instrumentation”

“Emergency Management of the Traumatized Pregnant Patient with Radiation Exposure”

“Emergency Management of a Multi-trauma Patient with Nerve Agent Exposure”

“Hospital Preparation for Disasters,”

Department of Engineering
Trinity College, Hartford, CT
November 15, 2007

“Hospital Preparation for Disasters,”
American Society of Anesthesiologists Annual Meeting, San Francisco, CA, October 16,
2007.

“Radiation Hazards,” [Workshop on All Hazards Considerations for Personal Protection and Airway Management, American Society of Anesthesiologists Annual Meeting, San Francisco, CA, October 15, 2007.](#)

“Trauma Update 2007: After Action Report for the ‘June Surprise’ Exercise at Hartford Hospital”

Grand Rounds, Department of Anesthesiology
Hartford Hospital, Hartford, CT, June 28, 2007.

“Anesthetic Toxicity and the Developing Brain”

Resident Seminar
Department of Anesthesiology
University of Connecticut School of Medicine
Farmington, CT, June 19, 2007

“Coagulation Issues and Cardiac Surgery”

Resident Seminar
Departments of Anesthesiology
University of Connecticut School of Medicine and Hartford Hospital
Hartford, CT, June 4, 2007

“Post Cardiopulmonary Bypass Coagulopathy,”

Resident Lecture, Department of Anesthesiology
University of Connecticut School of Medicine
Hartford, CT, May 4, 2007

“Hospital Preparation for Disasters”

Grand Rounds, Department of Anesthesiology
University of Connecticut School of Medicine
Farmington, CT, April 4, 2007.

“Massive Left Atrial Myxoma with Outflow Obstruction,” Case Presentation, Grand

Rounds, Department of Anesthesiology
Hartford Hospital, Hartford, CT, March 29, 2007.

“Hospital Preparation for Bioterror: A Medical and Biomedical Systems Approach (Biomedical Engineering),” 2007 Seminar Series #2, Biomedical Engineering Alliance and Consortium, Hartford, CT, March 8, 2007.

“Powered Air Purifying Respirator Training for Hazardous Environments,”

Simulator Center, Hartford Hospital, January 18, 2007.

“Hospital Preparation for Disasters,” Resident Didactic Night, Departments of Anesthesiology, Hartford Hospital and University of Connecticut School of Medicine, December 19, 2006.

“ASD in a Patient for Total Hip Arthroplasty,” Cardiac Subspecialty Update-2006, Grand Rounds, Department of Anesthesiology, Hartford Hospital, November 30, 2006

“Bioterror and Clinical Engineers, New England Society of Clinical Engineers, Farmington, CT, November 15, 2006.

“Hospital Systems Preparation,” *Management of Patients Exposed to Weapons of Mass Destruction Workshop*, American Society of Anesthesiologists Annual Meeting, Chicago, IL, October 15, 2006.

“Electromagnetic Interference.” Biomedical Engineering Seminar, University of Connecticut, Storrs, CT, September 21, 2006.

"Medical Management of Nuclear, Biological, and Chemical Casualty Resident Seminar" Departments of Anesthesiology Hartford Hospital and University of Connecticut School of Medicine, September 21, 2006.

“The Surgical Cooling Garment.” Presented at the MEDi2005 Medical Technology Conference and Exhibition, The Connecticut Convention Center, Hartford, CT, October 25, 2005.

“The Surgical Cooling Garment.” Presented at the MEDi2005 Medical Technology Conference and Exhibition, The Connecticut Convention Center, Hartford, CT, October 26, 2005.

"Medical Management of Nuclear, Biological, and Chemical Casualties: Resident Seminar with Hands-on Patient Simulation Using PAPRs," Department of Anesthesiology, Hartford Hospital, September 15, 2005

“Overview of Medical Management of Nuclear, Biological, and Chemical Casualties,” Grand Rounds, Department of Anesthesiology, Hartford Hospital, September 15, 2005

“Surgical Cooling Garment,” Hartford Metro Alliance, Hartford, CT, July, 12, 2005.

“Introduction to Bioterrorism,” Biomedical Engineering Seminar, University of Connecticut, Storrs, CT, February 8, 2005.

“Hospital Systems Preparation,” *Management of Patients Exposed to Weapons of Mass Destruction Workshop*, American Society of Anesthesiologists Annual Meeting, Las Vegas, NV, October 26, 2004.

"Medical Management of Nuclear, Biological, and Chemical Casualty Resident Seminar with Hands-on Simulation," Departments of Anesthesiology, Hartford Hospital and University of Connecticut School of Medicine, September 23, 2004

"How to Get in to Medical School," Biomedical Engineering Seminar
University of Connecticut School of Engineering, Storrs, CT, September 21, 2004

"Update in Anesthesia for Urological Surgery" and "Engineering Control Theory in Anesthesia Practice," Grand Rounds, Department of Anesthesiology, Hartford Hospital, Hartford, CT, July 29, 2004

Trauma Update: "Hospital Preparation for WMD Events," Grand Rounds, Department of Anesthesiology, Hartford Hospital, Hartford, CT, February 26, 2004

"Surgical Cooling Garment Study- Phase III," Grand Rounds, Department of Perioperative Nursing, Hartford Hospital, December 11, 2003

"The Surgical Cooling Garment," Advances in Medical Technology: Neural Engineering
The Sixth Annual BEACON Symposium and Technology Fair, Hartford Hospital, Hartford, CT, October 22, 2003.

"Preparation for WMD Events," Weapons of Mass Destruction Workshop, American Society of Anesthesiologists Annual Meeting, San Francisco, CA, October, 15, 2003

"Management of Chemical and Biological Casualties," Grand Rounds, Department of Perioperative Nursing, Connecticut Children's Medical Center, May 29, 2003

"Medical Management of Radiological Casualties," Grand Rounds, Department of Anesthesiology, Hartford Hospital, May 7, 2003

"Medical Management of Nuclear, Biological, and Chemical Casualty Resident Seminar"
Departments of Anesthesiology
Hartford Hospital and University of Connecticut School of Medicine, April 17, 2003

"Management of Radiological Casualties," Grand Rounds, Departments of Anesthesiology and Peri-operative Nursing, University of Connecticut School of Medicine, April 16, 2003

"Management of Chemical and Biological Casualties," Grand Rounds, Department of Orthopedic Surgery, Hartford Hospital, March 13, 2003

"Management of Chemical and Biological Casualties," Grand Rounds, Department of Peri-operative Nursing , Hartford Hospital, January 9, 2003

“Surgical Cooling Garment,” Cardiovascular Technologies: Medical Devices and Tissue Engineering. BEACON Symposium and Technology Fair, Hartford, CT, October, 31, 2002

“Palm OS Compatible Preoperative Record,” Abdul-Rahman, K., McIsaac, JH, Waberski, W. American Society of Anesthesiologists Annual Meeting, Orlando, FL , October 13-15, 2002

"Surgical Cooling Garment," Connecticut Innovations Technology Symposium Southington, CT, October 1, 2002

"Perioperative Care of the Trauma Patient," Multidisciplinary Conference, Hartford Hospital, May, 02, 2002

"Future Anesthesia Technology," Clinical Engineering Program, Biomedical Engineering University of Connecticut Graduate School, February 11, 2002

"Management of Chemical and Biological Casualties," Grand Rounds, Operating Room Staff, Department of Nursing, John Dempsey Hospital, University of Connecticut Health Center, January 9, 2002

"Management of Chemical and Biological Casualties," Grand Rounds, Department of Urology, University of Connecticut School of Medicine, December 20, 2001

"Management of Chemical and Biological Casualties," Grand Rounds, Department of Anesthesiology, University of Connecticut School of Medicine, November 7, 2001

"Management of Chemical and Biological Casualties," Grand Rounds, Department of Anesthesiology, Hartford Hospital, October 25, 2001

“Introducing Mountain Laurel Biomedical, LLC: Presentation of Research Areas of Interest,” BEACON Technology Fair, GE Medical Systems, Wallingford, CT, February 16, 2001

"Bispectral Analysis: Functional Intra-operative Neurological Monitoring," Department of Electrical Engineering, University of Connecticut Graduate School, October 10, 1999

"Anesthesia for Urology," Grand Rounds, Department of Urology, University of Connecticut School of Medicine, November 20, 1997

Professional and Technical Societies

American Society of Anesthesiologists

Committee on Trauma and Emergency Preparedness

Society of Cardiothoracic and Vascular Anesthesiologists

Society of Ambulatory Anesthesia
Anesthesia Patient Safety Foundation
Connecticut State Society of Anesthesiologists
American Medical Association
Connecticut State Medical Society
Hartford County Medical Association
European Society of Anesthesiologists
Institute of Electronic and Electronics Engineers (IEEE), Senior Member
IEEE Society of Engineering in Medicine and Biology
IEEE Electromagnetic Compatibility Society
IEEE Antennas and Propagation Society
IEEE Signal Processing Society
American Society of Mechanical Engineers (ASME)
ASME Bioengineering Division
ASME Applied Mechanics Division
ASME Heat Transfer Division
Biomedical Engineering Alliance of Connecticut
Amateur Radio Relay League
ASTM, International
E54, Committee on Homeland Security (Subcommittees on Preparedness,
Decontamination, and Personal Protection)
Disaster Preparedness and Emergency Response Association
World Association for Disaster Emergency Medicine

Directorships

Board of Directors The BEACON Foundation 1 Congress Street Ste 201 Hartford, CT 06114	2008
Board of Directors Hartford Anesthesiology Associates, Inc. 111 Founders Plaza, Suite 300 East Hartford, CT 06108	2005-2009
Board of Directors Hartford Anesthesiology Associates Foundation 111 Founders Plaza, Suite 300 East Hartford, CT 06108	2005-2009
Board of Directors Beach Park Point Association, Inc. Clinton, CT 06413	2002-2005

Business Ventures

Founder, CEO, and Director of Research and Development

Mountain Laurel Biomedical, LLC 1998-2009
 52 Northington Drive
 Avon, CT 06001

Co-Founder and Managing Member

Mountain Laurel Communications, LLC 2001-2002
 One Congress Street, Suite 206A
 Hartford, CT 06114

Community Service

Connecticut Amateur Radio Emergency Service 1992-2008
 American Heart Association Basic Life Support Instructor 2001-2006
 Camp Physician, Beach Park Point Association Summer
 Day Camp, Clinton, CT. 2001-2005
 Camden County, New Jersey Amateur Radio Emergency
 Service 1990-1991
 Radio Amateur Civil Emergency Service (Federal) 1990-1991
 Advisory Committee, Red and Black Gala, 2008
 Hartford Hospital

Academic Appointments

Associate Clinical Professor of Anesthesiology 07-01-2008
 University of Connecticut School of Medicine**
 Farmington, CT

Associate Adjunct Professor of Biomedical Engineering

University of Connecticut Graduate School* 02-01-1998
 Storrs, CT
 Biomedical Engineering

Assistant Clinical Professor of Anesthesiology

University of Connecticut School of Medicine* 08-01-1997
 Farmington, CT

Assistant Clinical Professor of Anesthesiology

University of Pennsylvania School of Medicine 04-27-1990
 Philadelphia, PA

Lecturer in Anesthesiology

University of Pennsylvania School of Medicine 12-01-1989
 Philadelphia, PA

Hospital Appointments

Chief of Trauma Anesthesia Chief of Urologic Anesthesia Senior Staff Hartford Hospital* Hartford, CT	10-07-1991
Chief of Urologic Anesthesia John Dempsey Hospital* University of Connecticut Health Center Farmington, CT	10-21-1997
Connecticut Children's Medical Center* Hartford, CT Staff Anesthesiologist	04-04-1996
The Institute of Living Hartford, CT Staff Anesthesiologist	09-01-1994
Newington Children's Hospital Newington, CT Staff Anesthesiologist	01-01-1992
405th Combat Support Hospital US Army Reserve West Hartford, CT Chief of Anesthesia	1991
Philadelphia Naval Hospital Philadelphia, PA Staff Anesthesiologist	04-04-1991
Walson Army Community Hospital Ft. Dix, NJ Staff Anesthesiologist	03-14-1991
Walter Reed Army Medical Center Washington, DC Staff Anesthesiologist	02-04-1991

* Current Appointments

* ** Pending Appointment

Mt. Sinai Hospital Philadelphia, PA Staff Anesthesiologist	10-05-1989
The Graduate Hospital Philadelphia, PA Staff Anesthesiologist	07-01-1989
819th Station Hospital US Army Reserve West Hartford, CT General Medical Officer	1986

Supplemental Medical Training

Hospital Incident Command System	2007, 2008
Hospital Management of Chemical, Biological, Radiological, Nuclear and Explosive Incidents Course, US Army Medical Research Institute of Chemical Defense, Edgewood, MD	2006
Pediatric Advanced Life Support Society of Cardiovascular Anesthesiologists Comprehensive Review of TEE	2005, 2007
Accuson Transesophageal Echocardiography (TEE) Optimization Course	2005, 2006
Hewlett-Packard TEE Teleconference	1994
Advanced TEE Course	1993
ASA Workshop on TEE	1992
Basic Life Support	1991, 1993, 2002
Basic Life Support Instructor	2002, 2004
Advanced Cardiac Life Support	1985, 1990, 2001
Pediatric Advanced Life Support	2005
PMSLIC Medicolegal Correspondence Course	1989
Advanced Subspecialty Training (PGY 4) Cardiac, Thoracic, and Vascular Anesthesia (4 months) Pediatric Anesthesia (4 months plus additional pediatric cardiac experience) Pain and Regional Anesthesia, Adult and Pediatric (2 months) Advanced Clinical Anesthesia (2 months)	1989
Advanced Trauma Life Support	1985

FEMA Emergency Management Institute Courses Completed

IS-100	Introduction to the Incident Command System
IS-200	ICS for Single Resources and Initial Action Incidents
IS-700	National Incident Management System (NIMS), an Introduction
IS-800.A	National Response Plan (NRP), an Introduction

US Department of Homeland Security Courses

Community Emergency Response Team (CERT) Program
IS-317 Introduction to Community Emergency Response Teams

Board Certification

Testamur, (Board Eligible) National Board of Echocardiography	2007
Diplomate, American Board of Anesthesiology	04-27-1990
Diplomate, National Board of Medical Examiners	07-01-1986

Medical Licenses

Connecticut
Pennsylvania

Civilian Honors and Awards

Guide to America's Top Anesthesiologists, Consumer's Research Council of America	2007
Elected to Senior Member, Institute of Electrical and Electronic Engineers	2006
AMA Physician Recognition Award with Distinction	2005
AMA Physician Recognition Award	2002-2004
AMA Physician Recognition Award	1998-2001
AMA Physician Recognition Award	1993-1996
Delaware Valley Hospital Council Certificate of Recognition	1991
AMA Physician Recognition Award	1989
Tovell Award for Excellence in Research, Academics, and Clinical Medicine, Hartford Hospital	1989

Special Credentials

Intra-operative Transesophageal Echocardiography, Hartford Hospital, 1993-2009.

Mentorships

Premedical Student Advisor
Department of Biomedical Engineering
University of Connecticut School of Engineering, 2004-2009

Research Mentor for Hartford Hospital Summer Student Fellows, 1998-2008.

Mentor, Avon "Uberbots," Team 1124, US FIRST Robotics, 2006-2007

Committee Membership

US Department of Homeland Security Educational Resource Workgroup, 2009.

Campus-wide Decontamination Committee

Hartford Hospital and CCMC
Hartford, CT, 2008-2009.

Emergency Management Committee's Drill and Exercise Subcommittee

Hartford Hospital
Hartford, CT, 2008-2009.

Section Chief, Anesthesia Resident Rotation for Echocardiography

Residency in Anesthesiology
University of Connecticut School of Medicine, 2006-2007.

**Chair, Task force on Emergency Preparedness, Committee on Trauma and
Emergency Preparedness, American Society of Anesthesiologists, October, 2007-2009.**

**Working Group on Safe Hospitals, World Association of Disaster and Emergency
Medicine, Amsterdam, Netherlands, May 2007.**

ASTM Task Group on Hospital Preparedness

Committee E54.02 on Emergency Preparedness, Training, & Procedures, 2007, 2009.
Committee on Decontamination, 2008.
Committee on Personal Protection, 2008.

Cardiac Anesthesia Steering Committee, Hartford Hospital, Hartford, CT, 2006-2009.

UConn Biomedical Engineering Constituency Committee,

Department of Biomedical Engineering,
School of Engineering, University of Connecticut, 2005

Multidisciplinary Trauma Committee, 2003-2009.

High-Risk Cardiac Surgery Committee, 2006-2009.

Hartford Hospital Emergency Management Committee, 2003-2009.

Hartford Hospital Medical Staff Council. 2002-2003.

Biomedical Engineering Alliance and Consortium. 1998-2009.

www.beaconalliance.org An organization of academic, industrial and clinical medical researchers which collaborates to produce new medical devices, foster biomedical engineering education, and biomedical business opportunities. *Member of Steering Committee and Biotech Incubator.*

Assistant Director of Education, Anesthesia Resident Education Committee, University of Connecticut/Hartford Hospital Combined Residency in Anesthesiology, 1997-1998. *Responsible for academic content of the training program and resident recruitment. Developed a new curriculum incorporating state of the art teaching techniques. Emphasis on applying high technology medicine in a managed care environment. Lead developer of marketing materials including a new brochure and Web site.*

Director, Medical Student Clerkship in Anesthesiology, University of Connecticut School of Medicine, 1998-1999. *Responsible for coordinating the education of medical students rotating through the Department of Anesthesiology.*

Staff Development and Education Committee, Department of Anesthesiology, Hartford Hospital, 1997-1999. *Responsible for departmental education, conferences, lectures, etc. Current projects include development of a departmental “intranet” information resource.*

Electromagnetic Compatibility Committee, Hartford Hospital, 1996-Present. *Advises hospital on radio-frequency interference issues.*

Executive Committee, Department of Anesthesiology, Hartford Hospital, 1996-1997. *Committee advises the Director and makes major policy decisions for the department.*

Hartford Hospital Materials Evaluation Committee, 1997-Present. *Committee approves major acquisitions of medical supplies and systems throughout Hartford Hospital.*

Chairman, Medical Capital Equipment Committee, Department of Anesthesiology, Hartford Hospital and Connecticut Children’s Medical Center, 2003-2007. Member, 1994-Present. *Evaluate and approve major anesthetic equipment purchases. Current projects include acquisition of “intranet” linked anesthesia gas delivery machines, physiologic monitors, integrated anesthesia management software system and BIS® (“level of consciousness”) monitors.*

Anesthesia Library Committee, Department of Anesthesiology, Hartford Hospital, 1993-1997. *Directed purchase and installation of anesthesia educational and simulation software for the department. Recommended and assisted with purchase of textbooks for the new Tovell Library.*

Chairman, New Physician Evaluation Task Force, Department of Anesthesiology, Hartford Hospital and Hartford Anesthesiology Associates, Inc., 1995. *Developed criteria for evaluation of new attending anesthesiologists at Hartford Hospital and Hartford Anesthesiology Associates, Inc.*

Anesthesia Resident Education Committee, Hartford Hospital Anesthesiology Residency, 1993-Present. *Redesigned curriculum and instituted a reading program that resulted in a class of residents scoring in the 99th percentile on the National Board Examinations.*

Research Subcommittee, Long Range Planning Committee, Department of Anesthesiology, Hartford Hospital, 1993. *Made recommendations which led to implementation of an infrastructure to facilitate research as well as an internal research review committee.*

MILITARY CAREER

Branch and Highest Rank

Major
Medical Corps
United States Army Reserve

Period of Service

04-09-1982 to 10-27-1999
Honorable Discharge

Military Education

Year Completed

Medical Management of Biological and Chemical Casualties Course, Ft. Detrick, MD and Edgewood Arsenal, MD	1993
Reserve Components Officer Advanced Course Phase I	1993
Range Safety Officer Course Ft. Devens, MA	1992
Deployable Medical Systems (DEPMEDS) Course Ft. Devens, MA	1992
Medical Management of Chemical Casualties	1987

804th Hospital Center
Boston, MA

Basic Officer Branch Course 1984
Ft. Sam Houston, TX

Health Issues and Mission Capability 1994
804th Hospital Center
Boston, MA

Medical Issues in Areas of Global Tension 1984
804th Hospital Center
Boston, MA

Managing the Acute Casualty 1983
804th Hospital Center
Boston, MA

Health and the Stressful Environment 1982
804th Hospital Center
Boston, MA

US Decorations

	<u>Year Awarded</u>
Armed Forces Reserve Components Medal	1992
Superior Unit Citation (WRAMC)	1991
Army Achievement Medal 3 rd Oak Leaf Cluster	1991
Army Achievement Medal 2 nd Oak Leaf Cluster	1991
National Defense Service Medal	1991
Army Reserve Components Achievement Medal 1 st Oak Leaf Cluster	1990
Army Achievement Medal 1 st Oak Leaf Cluster	1987
Army Reserve Components Achievement Medal	1986
Army Achievement Medal	1984

Record of Duty Assignment

	<u>Dates</u>
United States Army Reserve Control Group (Reinforcement) Army Personnel Center 9700 Page Boulevard St. Louis, MO 63132-5200	1995 to 1999

Chief Anesthesiologist 405 th Combat Support Hospital West Hartford, CT 06110-1292	1994-1995
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Supervised 6 MD anesthesiologists and 12 nurse anesthetists in a 300-bed hospital. Prepared standard operating procedures and training for the anesthesia section resulting in the 405th CSH being ranked as No. 1 in the United States for medical readiness.

Anesthesiologist 1991-1994

405th Combat Support Hospital
West Hartford, CT 06110-1292

Special Project Officer for Nuclear, Biological, and Chemical Casualty Care. Developed training for physicians and nurses for treating nuclear, biological, and chemical warfare casualties. Unit Medical Intelligence Officer for Task Force DIRIGO, Fuertes Caminos (North) 1993. Prepared medical threat analysis and briefings for a large medical operation to Guatemala.

Anesthesiologist 1991

F Company, 2nd Battalion
Medical Center Brigade
Walter Reed Army Medical Center
Washington, DC

Operation Desert Storm. Temporary Duty to Walson Army Community Hospital, Ft. Dix, NJ and Philadelphia Naval Hospital, Philadelphia, PA. Provided anesthesia care to sick and wounded service members.

Anesthesiologist 1989-1991

819th Station Hospital
West Hartford, CT 06110-1292

Assistant Operations Officer. Range Safety Officer. Planned training and operations for a 300 bed hospital. Operated a field emergency room during exercises at Ft. Drum, NY.

Commander 1987-1989

526th Medical Detachment (Dispensary)
West Hartford, CT

Commanded, supervised, and trained a 10 member Rapid Deployment Force medical team. Prepared medical intelligence summaries, war plans, and planned military medical operations for a light, highly mobile field dispensary. Treated patients under simulated combat conditions in support of 8000 troops of the 50th Armored Division at Ft. AP Hill, VA. Nuclear, Biological, Chemical Officer, Chemical Detection Team Leader, Radiological Monitoring Team Leader, Physical Security Officer, Arms Officer. Developed "Emergency Medical Handbook" that was used as a prototype for the Army's "Chemical Handbook."

General Medical Officer 1986-1987

Physical Examination Section
819th Station Hospital
West Hartford, CT

Performed physical examinations. Operated emergency field treatment station at Ft. Campbell, KY in support of Basic Training.

Field Medical Assistant

1982-1986

Training Section

819th Station Hospital

West Hartford, CT

Instructor for Expert Field Medical Badge Course. Trained unit personnel in military tasks. Performed emergency field medical treatment.