

Craig F. Feied, MD, FACEP, FAAEM, FACPh

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Education

INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
National Capital Poison Center Georgetown University, Washington, DC	Fellowship	1986	Toxicology Informatics
Georgetown University, Washington, DC George Washington University, Washington, DC MD Shock-Trauma, Baltimore, MD	Residency	1985	Emergency Medicine
University of Hawaii at Queens Medical Center, Honolulu, HI	Internship	1983	Internal Medicine
University of California, San Diego, CA	M.D.	1982	Medicine
University of California, Berkeley, CA	A.B.	1978	Biophysics

Academic & Professional

2008 - Present Chief Health Strategy Officer, Microsoft Corporation / Health Solutions Group
2006 - 2008 Engineering General Manager, Microsoft Corporation / Health Solutions Group
2006-Present Professor of Emergency Medicine, Georgetown University School of Medicine, Washington, DC
2002-2007 Director, Institutes for Innovation in Medicine, Washington, DC
- Institute for Medical Informatics
- Medical Media Lab
- Simulation and Training Environment Lab
- Center for Biologic Counter-terrorism and Emerging Diseases
- Institute for Public Health and Emergency Readiness
- Institute for Nursing Innovation
1997-Present Director, Federal Project ER One/Hospital One All-Risks Ready Bioterrorism Program, Washington, DC
1996-2002 Clinical Associate Professor of Emergency Medicine, The George Washington University School of Medicine, Washington, DC
1995-1996 Associate Professor of Emergency Medicine, The George Washington University School of Medicine, Washington, DC
1995-2006 Director of Informatics, EMC Emergency Physicians, MedStar Health Group, Columbia, MD
1995-Present Director, National Center for Emergency Medicine Informatics
1995-1998 Distinguished Fellow, The Ronald Reagan Institute of Emergency Medicine
1986-1995 Director of Informatics, The George Washington University Medical Center, Dept of Emergency Medicine
1986-1995 Assistant Professor of Emergency Medicine, The George Washington University School of Medicine
1993-1995 Associate Director, Center for Wound Healing, The George Washington University Medical Center

Diplomate/ Fellow

2004-Present Fellow, American College of Phlebology
1995-Present Fellow, American Academy of Emergency Medicine
1991-Present Fellow, American College of Emergency Physicians
1987-Present Diplomate, American Board of Emergency Medicine (re-examined 1997 and 2007)
1983 Diplomate, National Board of Medical Examiners

Other Experience

1999-2006 Managing Director, Datomics Licensing, LLC
1999-2006 Chief Executive Officer, General Datomics, Inc
1999-2006 Chief Editor, eMedicine Textbook of Emergency Medicine, Boston Publishing
1999-2001 Chief Technology Officer, eMedicine.com
1992-2002 President, Phlebology Associates
1992-1995 President, LifeStar International, Inc.
1981-1983 Chief Technologist, Diversified Data Systems
1980-1986 Owner, Microcomputer Products Group
1972-1978 General Manager, Lion Sailing School & Yacht Charters

Board, Elected, and Appointed Positions

2008 - Present	Chair, Finance Committee of the American Medical Informatics Association
2006 – 2008	Member, Finance Committee of the American Medical Informatics Association
2007 - Present	Treasurer, Board of Directors, American Board of Phlebology
2005-2007	President, Informatics Section, American College of Emergency Physicians
2005-2007	Member, Board of Directors, National Institute for Medical Informatics
2005-2007	Member, Board of Directors, WHC Foundation, MedStar Health
2002-Present	Paladin Capital Group / Homeland Security Fund Board of Advisors
2000-2002	President, American College of Phlebology (Board of Directors 1994-2005)
1998-2002	President, The Historic George Town Club (Board of Directors 1994-2003)
1998-2004	Member, Board of Directors, Disability Policy and Planning Institute
2001-2003	Member, Board of Directors, Parco Merged Media
1998-2001	Member, Board of Advisors, Pinpoint Geolocation Systems
1997-2000	Chair, Editorial Board, Emed.org
1996-1999	Member, Board of Advisors, Headgear Inc.
1995-1997	Member, Board of Directors, Quantex Inc
1994-2002	Member, Scientific Advisory Board, UIP
1991-1993	Member, Board of Directors, Pisces of Washington, DC
1990-2001	Member, Board of Directors, Architectural Angles, Inc.
1989-1991	Member, Board of Advisors, Kurzweil Applied Intelligence

Community Service

2005-2006	Chair, National Capital Area Regional Health Information Organization
1999	Chair, Grants Review Committee, Next-Generation Internet Program (phase I and phase II) National Library of Medicine, National Institutes of Health
1994-2005	Member, Scientific Advisory Board, International Union of Phlebology World Congresses
1993	Member, Directors Committee, Conference on Computers, Freedom and Privacy
1994-2006	Member, Editorial Review Board, Dermatologic Surgery
1994-2006	Member, Editorial Review Board, Journal of Emergency Medicine
1991-2006	Member, Editorial Review Board, Annals of Emergency Medicine
1991-2006	Member, Editorial Review Board, American Journal of Emergency Medicine

Institutional Service

2005-2006	Member, Board of Directors, WHC Foundation, MedStar Health
2002-2006	IS Steering Committee, MedStar Health
2000 – 2006	ER One oversight committee, MedStar Health
2000 – 2003	Washington Hospital Center Strategic Planning Steering Committee, MedStar Health
2000	MedStar Board of Directors E-Commerce Task Force MedStar Health
1999	Wireless Communications Oversight Committee, Washington Hospital Center
1998	Managed Care QI committee, Washington Hospital Center
1997 – 2001	Outcomes Initiatives Committee, Washington Hospital Center
1997 – 1998	Chair, Medical Education Task Force, Washington Hospital Center
1997 – 2001	Continuing Medical Education Advisory Committee, Washington Hospital Center
1998 – 1999	Electronic Clinical Documentation Committee, Washington Hospital Center
1997 – 1999	Web Oversight Committee, Washington Hospital Center
1997 – 2001	MWCME Committee, Washington Hospital Center
1994 – 1995	Clinical Pathways Group, George Washington University

Honors

2008	AMDIS Award for Outstanding Achievement in Applied Medical Informatics
2005	Microsoft Physician of the Year
2005	Modern Healthcare Architectural Award of Excellence (Project ER One)
2003	Informatics Leadership Achievement Award, American College of Emergency Physicians
2000	Computerworld Smithsonian Medal of Recognition
1997	Admitted to Cosmos Club in the category of Meritorious Original Work
1995	Teaching Award in Emergency Medicine, George Washington University
1994	Moroccan Medal of Honor for distinguished contribution to medical research
1994	District of Columbia award of merit for community service

Professional Societies

IEEE Senior Member (2007 -)
 American Venous Forum (2007 -)
 American College of Emergency Physicians (1983 –)
 Society for Academic Emergency Medicine (2000 –)
 American Academy of Emergency Medicine (1995 –)
 American Medical Informatics Association (1992 -)
 American College of Phlebology (1997 -)
 North American Society of Phlebology (1990 – 1997)
 American Society of Lymphology (2000 - 2003)
 Phlebology Society of America (1990 - 1998)
 Virginia Thoracic Society
 The Wound Healing Society (1996 - 1999)
 Undersea and Hyperbaric Medical Society
 American Medical Association (1984 -)
 Medical Society of the District of Columbia
 AMIA Section on Anaesthesiology/Critical Care & Emergency Medicine
 AMIA Section on Medical Imaging Systems
 AMIA Section on Computerized Medical Records
 ACEP Section on Computer Medicine
 ACEP Section on Hyperbaric Medicine
 ACEP Section on Air Transport Medicine

Grants and Contracts

2007 \$6,000,000 from DC Government to DCPCA and NIMI for development of an NCA-RHIO.
 2005 \$443,021 from US Environmental Protection Agency for Project Climate Query.
 GAD# R832753010: Database and Tools for Investigation of Climate-Mediated Human Disease. Principal Investigator.
 2005 \$2,000,000 DC Appropriations for further work in disaster readiness and Federal Project ER One. Co-Investigator.
 2005 \$1,290,000 Labor HHS appropriations bill for further design work on Federal Project ER One. Co-Investigator.
 2005 \$776,374 United States Department of Homeland Security UASI Grant: NCA Family Reunification Project. Contractor.
 2005 \$25,000 GIFL grant: Automated Alarm Systems to Promote Patient Safety. Co-Investigator
 2005 \$25,000 GIFL grant: Embedded Decision Support for Hospital Operations. Principal Investigator
 2004 \$18,000,000 Aggregate funding for Hospital Readiness (HHS, DCA, Other)
 2004 \$99,800 from NSF for creation of a Massively-Scaleable Emergency Medical Resource Information Exchange System (MEMRIES) Based on an Entity-Attribute-Value (EAV) Database. Co-investigator.
 2003 \$6,528,422 from the United States Institutes of Health, National Library of Medicine for RFP 02-103/VMS: Project Sentinel Collaboratory, Application of Advanced Network Infrastructure Technology in Health and Disaster Management. Co-investigator.
 2000 \$2,200,000 from HHS/OER: Federal Project ER One / Hospital One: The All-Risks-Ready Hospital. Co-investigator.

Privately-Funded Development Projects

2005 National Emergency Encounter Registry
 2005 Hospital Risk Reduction through Automated Alerting Systems
 2005 Regional Health Information Exchange
 2005 OCTAVE Methodology Risks Assessment for Biosurveillance and Clinical Information Systems
 2004 Automatic gesture recognition for computer systems control
 2004 Automatic facial image capture for reduction of medical errors
 2004 National Biosurveillance Testbed Initiative
 2003 Free-roaming Robotic Systems in the Hospital Setting
 2003 Clinical Results Delivery via Portal and Cellular wireless network
 2003 Point-of-care medication administration records
 2003 Point-of-care lab specimen acquisition tracking and labeling
 2002 Virtual and Augmented Reality for Medical Data Display
 2002 Wireless Voice-controlled Medical Data Retrieval
 2002 Digital Angiography and Remote Dynamic Image Access

2001 Wireless PDAs for Medical Information Access & Charge Capture
 2001 Comprehensive Web Content Management System
 1999 Online Authoring/Editing System
 1999 Enterprise Document Imaging System
 1999 DICOM PACS Radiology Image Display Subsystem
 1996-Present Comprehensive Hospital Clinical Information and Decision Support System.
 1996 Online System for Medical Education
 1994-1995 Laboratory Results Push Display System.
 1993-1994 Emergency Department Billing System
 1993-1994 Clinical Charting and Tracking System for Wound Care
 1989-1992 Medical Office Systems
 1992 Hospital Paging and Call-tracking system
 1989 Cholesterol Screening Data Management System
 1988 Hyperbaric Medicine Clinical Management System
 1988-1996 Emergency Department Clinical Information and Decision Support System
 1988 Worker's Compensation Billing System (International Bunkhouse Rule System)
 1987-1988 AAPCC National Registry of Toxic Exposures
 1986-1987 National Acetaminophen Exposures Data Tracking System
 1976-1986 Phototypesetting and Compositing System; General Accounting System; Telecommunications Console; Generic B-tree Database System; Remote Access Medical Claims Processing System; Modem Drivers; Printer Drivers; Keyboard drivers; Remote Bulletin Board Systems; Floppy Drive Encoders; Games Suites; etc.

Recent Work

National Capital Area Regional Health Information Exchange
 Strategic planning for research collaboratory
 Optimizing NLM Vocabularies to bridge medical libraries and clinical EMRs
 Building visual analytic strategies and software tools to explore numerical, categorical, and network forms of temporal data
 Automated Geospatial Camera Calibration
 Assessing the Cognitive Value of Immersive Data Visualization in Clinical Environments
 Automating Vector Identification and Notification (AVIAN)
 Centralized, Collaborative, Command and Control in Emergency Medicine
 Digital Paper for Patient Driven Data Capture
 Patient Image Capture System to Reduce Identity Errors
 A rapid low-cost viral detection system to detect pathogenic viruses in a live clinical environment
 Automated Real-Time Tracking of Patients, Hospital Personnel, and Equipment with EMS Integration for Enhanced Biothreat and Multi-casualty Disaster Response
 Improving Rapid Integration of Decision Support Systems (IRIDESS)
 Automated remote leadless acquisition of vital signs
 Automated alarms in clinical medicine
 Biometric authentication and the master patient index problem
 Augmented reality systems for clinical decision support
 Mobile data transmission technologies
 Electronic publication on the Internet
 Neural networks and fuzzy systems as adjuncts in clinical diagnosis

Media coverage

Projects have received national coverage (<http://imedi.org/info>) including:

CBS evening news
 NBC Nightly News
 CNN
 USA Today
 The Washington Post
 The Washington Times
 The Wall Street Journal
 eCompany Now / Business 2.0
 Healthcare Informatics
 Modern Healthcare
 Emergency Medicine News

MSNBC
 Harvard Business School Case Studies
 Microsoft Case Studies
 Microsoft Executive Circle
 Beyond Tomorrow (Australia)

Teaching Activities

2005-2006 Informatics Director, Residency Program in Emergency Medicine, Georgetown University School of Medicine
 2004-2005 Lecturer, Harvard Graduate School of Design, Executive Education Division
 2003-2008 Guest lecturer, Harvard Business School
 2000–2006 Director, Fellowship in Medical Informatics, WHC Division of Graduate Medical Education, Georgetown University School of Medicine
 1996-2006 Director, External Informatics Rotations, WHC Division of Graduate Medical Education, Georgetown University School of Medicine
 1993-1996 Associate/Assistant Professor, Lecture series and clinical rotations, The George Washington University School of Medicine
 1993 Course director, Medical Data Acquisition and Management, The George Washington University School of Medicine

Other Projects & Achievements

1999-2006 Study and design phases I – III of Federal Project ER One, a \$400M “All-Risks-Ready” demonstration medical facility in the nation’s capital.
 2005 First group to participate in data-sharing with the United States Centers for Disease Control for the BIOSENSE program of biosurveillance.
 1992-2005 Leadership in a successful effort to establish a new AMA designated specialty (Phlebology).
 1996 First Internet Medical Symposium: The first-ever “live” online medical symposium, addressing the topic of new cardiac markers for the early detection of acute myocardial infarction.
 1996-2003 Emergency Medicine Question-A-Day: The largest Internet-based regular educational mailing, offered a medical question, an answer, and a literature reference each day to thousands of subscribing physicians.
 1994 NCEMI website: The National Center for Emergency Medicine Informatics operates the oldest emergency medicine site on the Web, with clinical tools, online reference sets, reviews, archives, software, and other resources for clinical informatics.

Publications - papers

1. Zimmet SE, Min R, Feied CF. Varicose Vein Treatment With Endovenous Laser Therapy. eMedicine from WebMD. Updated November 07, 2008. Available at: <http://www.emedicine.com/derm/topic750.htm>
2. Plaisant C, Lam SJ, Shneiderman B, Smith MS, Roseman DH, Marchand G, Gillam M, Feied CF, Handler JA, Rappaport H: Searching electronic health records for temporal patterns in patient histories: a case study with Microsoft Amalga. AMIA Annual Symposium proceedings. Proc AMIA 2008;(Nov):601-5.
3. WA Wachs J, Stern H, Edan Y, Gillam M, Feied CF, Smith M, Handler J: A hand gesture sterile tool for browsing MRI images in the OR. JAMIA 2008; 15(3):321-3.
4. Saft HL, Yi D, Feied CF, Polk A, Kuru T: Clinical Factors Which May Influence the Utilization of an Intensive Insulin Protocol (IIP). American Thoracic Society Annual Meeting (Abstract), 2007.
5. WA Wachs J, Stern H, Edan Y, Gillam M, Feied CF, Smith M, Handler J: A Real-Time Hand Gesture Interface for a Medical Image Guided System. International Journal of Intelligent Computing in Medical Sciences and Image Processing, 2007.
6. Wachs J, Stern H, Edan Y, Gillam M, Feied CF, Smith M, Handler J: Gestix - A Doctor-Computer Sterile Gesture Interface for Dynamic Environments. Soft Computing in Industrial Applications. Recent and Emerging Methods and Techniques Series: Advances in Soft Computing, Vol. 39 2007, 30-39.
7. Wachs J, Stern H, Edan Y, Gillam M, Feied CF, Smith M, Handler J: Doctor-Computer Interface using Gestures. In Proc. of the 7th International Workshop on Gesture in Human-Computer Interaction and Simulation, GW 2007. 23-25 May 2007, Lisbon, Portugal.
8. Cazangi RR, Feied CF, Gillam M, Handler JA, Smith MS, Von Zuben F: An Evolutionary Approach for Autonomous Robotic Tracking of Dynamic Targets in Healthcare Environments. IEEE Congress on Evolutionary Computing, 2007.
9. Dade ES, Smith MS, Lucey DR, Feied CF, Wuerker CK, Myerson K: N-95 Respirator Fit-Testing of 5,200 Persons in One Hospital over 6 months – Lessons Learned. International Meeting on Emerging Diseases and Surveillance, International Society for Infectious Diseases, Vienna, Austria, 2007
10. Gillam M, Feied CF, Handler JA: Practical Experience with a Data Centric Model for Large-Scale, Heterogeneous Data Integration Challenges (Abstr). The eScience Workshop, The Johns Hopkins University, 2006

11. Smith M, Feied C, Gillam M, Handler J: Automated medical image library creation for education. *AMIA Annu Symp Proc.* 2006:1103.
12. Handler J, Feied C, Smith M, Gillam M: Improving a UMLS based allergy list for use in live electronic medical record systems. *AMIA Annu Symp Proc.* 2006:942.
13. Gillam M, Feied C, Birchfield S, Handler J, Smith M: Automated patient facial image capture to reduce medical error. *AMIA Annu Symp Proc.* 2006:929.
14. Feied C, Gillam M, Wachs J, Handler J, Stern H, Smith M: A real-time gesture interface for hands-free control of electronic medical records. *AMIA Annu Symp Proc.* 2006:920.
15. Handler JA, Gillam M, Kirsch TD, Feied CF: Metrics in the Science of Surge. *Acad Emerg Med* 2006;13 1173-1178
16. Shannon T, Feied CF, Smith MS, Handler JA, Gillam M: Wireless handheld computers and voluntary utilization of computerized prescribing systems in the Emergency Department. *J Emerg Med.* 2006; Oct;31(3):309-15.
17. Kartoun U., Stern H., Edan Y., Feied C., Handler J., Smith M. and Gillam M. 2006. Use of Medical Robotics in Biothreat Situations (Poster). *AMIA 2006 Annual Symposium.* Nov. 11 - Nov. 15, 2006, Washington D.C.
18. Kartoun U., Stern H., Edan Y., Feied C., Handler J., Smith M. and Gillam M. 2006. Vision-Based Autonomous Robot Self-Docking and Recharging. *ISORA 2006 11th International Symposium on Robotics and Applications (Robotics Track) at World Automation Congress (WAC 2006).* July 24-27, Budapest, Hungary.
19. J. Wachs, H. Stern, Y. Edan, M. Gillam, C. Feied, M. Smith and J. Handler: A Real-Time Hand Gesture Interface for Medical Visualization Applications. *Proceedings of the 10th Online World Conference on Soft Computing in Industrial Applications, WSC10, Springer-Verlag, Germany 2005*
20. J. Wachs, H. Stern, Y. Edan, M. Gillam, C. Feied, M. Smith and J. Handler: A Real-Time Hand Gesture System based on Evolutionary Search. *Proceedings of the Genetic and Evolutionary Computation Conference, GECCO-2005, ACM Press, New York 2005*
21. U. Kartoun, H. Stern, Y. Edan, C. Feied, J. Handler, M. Smith, and M. Gillam: Collaborative $Q(\lambda)$ Reinforcement Learning Algorithm – A Promising Robot Learning Framework (Abstr). *Proceedings Sixth IASTED International Conference on Robotics And Applications, RA-2005, Cambridge, MA 2005*
22. Feied C: Building your own electronic medical record -- from A to Z. *Azyxxi system offers access to a wide range of clinical data. Mod Healthc.* 2005 Nov 14;35(46):S14-5.
23. Feied CF, Handler JA, Smith MS, Gillam M, Kanhouwa M, Rothenhaus T, Conover K, Shannon T: Clinical information systems: instant ubiquitous clinical data for error reduction and improved clinical outcomes. *Acad Emerg Med.* 2004 Nov;11(11):1162-9.
24. Handler JA, Feied CF, Coonan K, Vozenilek J, Gillam M, Peacock PR Jr, Sinert R, Smith MS: Computerized physician order entry and online decision support. *Acad Emerg Med.* 2004 Nov;11(11):1135-41.
25. Feied CF, Smith MS, Handler JA: Keynote address: Medical informatics and emergency medicine. *Acad Emerg Med.* 2004 Nov;11(11):1118-26.
26. Handler JA, Adams JG, Feied CF, Gillam M, Vozenilek J, Barthell EN, Davidson SJ: Emergency medicine information technology consensus conference: executive summary. *Acad Emerg Med.* 2004 Nov;11(11):1112-3.
27. Handler JA, Adams JG, Feied CF, Gillam M, Vozenilek J, Barthell EN, Davidson SJ: Developing consensus in emergency medicine information technology. *Acad Emerg Med.* 2004 Nov;11(11):1109-11.
28. Feied CF, Smith MS, Handler JA, Gillam M, Pietrzak MP: Impact Of Informatics And New Technology On Emergency Care Environments. *Top Emerg Med.* 2004 Apr-Jun; 26 (2): 119-127.
29. Handler JA, Kontrick A, Feied CF, Gillam MT, Korley F, Collings J: An Automated Electronic Medical Student Assessment Tool (Abstr). *Academic Emergency Medicine* 2003 10:916
30. Handler JA, Zich D, Feied CF, Gillam MT, Collings J: An Automated Electronic Teaching File System (Abstr). *Academic Emergency Medicine* 2003 10:915
31. Handler JA, Feied CF, Sundaram J, Yarnold P, Gillam M, Adams JG, Soltysik RC: Instant Disposition: Validation of an Admission Prediction Model (Abstr). *Academic Emergency Medicine* 2003 10:537
32. Barthell EN, Cordell WH, Moorhead JC, Handler J, Feied C, Smith MS, Cochrane DG, Felton CW, Collins MA: The frontlines of medicine project: A proposal for standardized communication of emergency department data for public health uses including syndromic surveillance for biological and chemical terrorism. *Ann Emerg Med* 39(4) 422-29, April 2002.
33. Handler JA, Feied CF, Gillam M. An Overview of Emergency Medicine Informatics. *PhyAmerica Clinical Bulletin*, 2002(2).
34. Feied CF: Telecommunications and the Next-Generation Internet for Health Care. *Ann Emerg Med* 2001;38(3):293-302
35. Feied C, Smith M: It's all about speed. *Healthc Inform.* 2000 Nov;17(11):57-60, 62, 64.
36. Feied CF, Smith MS, Handler JA, Kanhouwa M: Emergency medicine can play a leadership role in enterprise-wide clinical information systems. *Ann Emerg Med* 35 (2) 162-7, February 2000.
37. Feied CF, Smith MS, Handler JA, Gillam M, Kanhouwa M: The Transformation of Medicine in the Information Age. *Emergency Medicine News.* 2000; 22(10):2,22
38. Gillam M, Handler J, Feied C, Kharasch M, Vozenilek J, Flaherty J: Ensuring Procedural Competence in Emergency Medicine Residents Using a Free Online Procedure Log. *Ann Emerg Med* 2000; 36(4):S57.

39. Handler J, Gillam M, Feied C, Yarnold P, Smith M: Usage of an Internet-based SDI System. *Ann Emerg Med* 2000; 36(4):S58.
40. Handler J, Gillam M, Feied C, Yarnold P, Vozenilek J, Smith M: An Emergency Medicine Internet Meta-search Tool: Data Entry Errors and Tool Utilization. *Ann Emerg Med* 2000; 36(4):S58.
41. Handler J, Gillam M, Feied C, Smith M: The Success of Internet Based Techniques for Data Collection. *Ann Emerg Med* 2000; 36(4):S58
42. Gillam M, Leung J, Handler J, Feied C, Vozenilek J, Graff J, Flaherty J: Effect of Purchasing a Digital Camera on Residency Education. *Ann Emerg Med* 2000; 36(4):S79.
43. Gillam M, Handler J, Feied C, Kharasch M, Vozenilek J, Smith M: Ensuring Procedural Competence in Emergency Medicine Residents Using a Free Online Procedure Log (Abstr). *Ann Emerg Med* 2000; 36 (4):S57
44. Handler J, Gillam M, Feied C, Yarnold P, Smith: Usage of an Internet-based SDI System (Abstr). *Ann Emerg Med* 2000; 36(4):S58.
45. Handler J, Gillam M, Feied C, Yarnold P, Vozenilek J, Smith: An Emergency Medicine Internet Meta-search Tool: Data Entry Errors and Tool Utilization (Abstr). *Ann Emerg Med* 2000; 36(4):S58.
46. Handler J, Gillam M, Feied C, Smith M: The Success of Internet Based Techniques for Data Collection (Abstr). *Ann Emerg Med* 2000; 36(4):S58
47. Handler JA, Gillam M, Wang EE, Feied CF, Yarnold PR, Bose S, Smith MS: Computers and connectivity in Illinois emergency departments. *Acad Emerg Med.* 1999 Dec;6(12):1249-54.
48. Handler JA, Feied CF, Smith MS, Kanhouwa M: Web-Connected ER. Physicians and Computers. 1999;16 (5):36-40.
49. Handler JA, Gillam M, Wang E, Feied CF, Yarnold P, Bose S, Smith M: Connectivity in Illinois Emergency Departments. Society for Academic Emergency Medicine; 1999
50. Smith MS, Feied C: The Next-Generation Emergency Department. *Ann Emerg Med* 32(1): 65-74, July, 1998.
51. Handler JA, Feied CF. The state of emergency medicine research (letter). *Acad Emerg Med.* 1998 Jul;5(7):745-6.
52. Feied, CF: Deep Vein Thrombosis: Recognition, Treatment, and Prevention. *Audio Digest Foundation* 1997; 44 (21).
53. Feied, CF: Biochemical markers for myocardial infarction. *Cardiac Markers and Emergency Triage Internet Symposium* 1996;2-4
54. Feied CF, Smith MS: Emergency medicine in cyberspace. *Emergency Medicine News* 1996;6.
55. Feied CF, Stephen JM: Thrombose Veneuse. *Phlébologie Annales Vasculaires* 1996;4:421-426.
56. Handler JA, Feied CF: Acute Pulmonary Embolism: Aggressive therapy with anticoagulants and thrombolytics. *Postgraduate Medicine* 1995;97:61-72.
57. Feied CF, Miller GH, Stephen JM, Handler JA: Chronic pulmonary embolism. *Postgraduate Medicine* 1995;97:75-84.
58. Miller GH, Feied CF: Suspected pulmonary embolism. *Postgraduate Medicine* 1995;97:51-58.
59. Stephen JM, Feied CF: Venous thrombosis. *Postgraduate Medicine* 1995;97:36-47.
60. Feied CF, Jackson JJ, Bren TS, et al: Allergic reactions to povidocanol. *JDSO* 1994;20:466-468
61. Scott JL, Smith MS, Sanford SM, et al: Effectiveness of transnasal butorphanol for the treatment of musculoskeletal pain. *Am J Emerg Med* 1994;12:469-471.
62. Feied CF: Emergency management of blocked & clotted catheters, arteries, and veins. *Clinical Courier* 1994;12:3-7.
63. Feied CF: Deep vein thrombosis: The risks of sclerotherapy in hypercoagulable states. *Seminars in Dermatology* 1993;12(2):135-149.
64. Jolly BT, Scott JL, Feied CF, Sanford SM: Functional illiteracy among emergency department patients: A preliminary study. *Ann Emerg Med* 1993;22(3):573-578.
65. Feied CF: Venous thromboembolism. *Clinical Courier* 1993;11:1-4.
66. Feied CF, D'Orta JA, McCann M: Emergency procedures for filming motion pictures on location. *APHA* 1992;117:39
67. Hallagan LF, Scott JL, Horowitz BC, Feied CF: Clostridial myonecrosis resulting from subcutaneous epinephrine suspension injection. *Annals of Emergency Medicine* 1992;21 (4):122-124.
68. Feied CF: Pulmonary embolism: PIOPED & lytic therapy. *Clinical Courier* 1992;10 (2):1-4.
69. Burns RB, Stoy DB, Feied CF, Nash E, Smith M: Cholesterol screening in the emergency department. *J Gen Intern Med* 1991;6 (3):210-215.
70. Burns RB, Stoy DB, Feied CF, Nash E, Smith M: Cholesterol screening in the emergency department (Abstr). *Prevention* 89 1989
71. Feied CF: Diagnosis and management of pulmonary embolism. *Clinical Courier* 1991;9 (1):1-4.
72. Feied CF: Accident and injury at sea. *Health Bulletins* 1990;4 (7):2-7.
73. Feied CF: Diagnostic peritoneal lavage. *Postgraduate Medicine* 1989;85 (4):40-49.
74. Feied CF: Computer-assisted analysis of pseudorandom events. *National Lottery Digest* 1986;2 (2):2-4.
75. Feied CF: The immediate future in microcomputing. *BDOS Proceedings* 1982;3 (7):6-8.
76. Feied CF: Advanced functions of the operating system: Tips & techniques. *BDOS Proceedings* 1982;3 (1):22-30.
77. Feied CF: Determinants of cell membrane deformability: Protein-lipid interactions in a lipid bilayer model (Abstr). *Thayer Symposium* 1978

78. Feied CF: Erythrocyte membrane deformability characterized by resistive pulse spectroscopy and electron paramagnetic resonance spectroscopy (Abstr). San Francisco Blood Cell Symposium 1978

Textbooks and Textbook Chapters

79. Weiss RA, Feied CF, Weiss MA: Vein Diagnosis and Treatment: A Comprehensive Approach. 1st ed. New York, McGraw Hill; (2000)
80. Feied CF: Venous Anatomy and Pathophysiology, in Fronek HS (Ed) Venous Disease For Clinicians, 1st ed. ACP Publishing; 2004
81. Feied CF: Sclerosing Solutions, in Fronek HS (Ed) Venous Disease For Clinicians, 1st ed. ACP Publishing; 2004
82. Feied CF, Ninia JG: Thrombosis and Thrombophlebitis, in Fronek HS (Ed) Venous Disease For Clinicians, 1st ed. ACP Publishing; 2004
83. Feied CF: Thrombolytic Therapy, in Adler J (ed) Emergency Medicine, 2nd ed. Boston, Boston Medical Publishing; 2002
84. Feied CF: Varicose Veins, in Zevitz M (ed) Medicine, 2nd ed. Boston, Boston Medical Publishing; 2002
85. Feied CF: Septic Thrombophlebitis, in Adler J (ed) Emergency Medicine, 2nd ed. Boston, Boston Medical Publishing; 2002
86. Feied CF: Superficial Thrombophlebitis, in Adler J (ed) Emergency Medicine, 2nd ed. Boston, Boston Medical Publishing; 2002
87. Feied CF: Venous Insufficiency, in James W (ed) Dermatology, 2nd ed. Boston, Boston Medical Publishing; 2002
88. Feied CF: Varicose Veins and Spider Veins, in James W (ed) Dermatology, 2nd ed. Boston, Boston Medical Publishing; 2002
89. Feied CF: Deep Vein Thrombosis and Pulmonary Embolism, in Rosen P, Barkin RM (eds): Emergency Medicine: Concepts and clinical practice. 5th ed. St. Louis, Mosby Year Book; 2001
90. Feied CF: Venous Insufficiency, in Geibel J (ed) General Surgery, 1st ed. Boston, Boston Medical Publishing; 2001
91. Feied CF: Deep Vein Thrombosis, in Geibel J (ed) General Surgery, 1st ed. Boston, Boston Medical Publishing; 2001
92. Feied CF, Weiss R, Hashemiyoon R: Venous Insufficiency, in James WD, Elston DM (eds) Dermatology, 1st ed. Boston, Boston Medical Publishing; 2000
93. Feied CF, Weiss R, Hashemiyoon R: Varicose Veins and Spider Veins, in James WD, Elston DM (eds) Dermatology, 1st ed. Boston, Boston Medical Publishing; 2000
94. Feied CF, Min R, Weiss R, Hashemiyoon R: Varicose Vein Treatment with Endovenous Laser Therapy, in James WD, Elston DM (eds) Dermatology, 1st ed. Boston, Boston Medical Publishing; 2000
95. Feied CF, Weiss R, Hashemiyoon R: Varicose Vein Treatment by Sclerotherapy, in James WD, Elston DM (eds) Dermatology, 1st ed. Boston, Boston Medical Publishing; 2000
96. Weiss R, Feied CF, Hashemiyoon R: Varicose Vein Treatment by Radiofrequency Ablation, in James WD, Elston DM (eds) Dermatology, 1st ed. Boston, Boston Medical Publishing; 2000
97. Feied CF: The Spectrum of Venous Disease, in Weiss RA, Feied CF, Weiss MA (eds): Vein Diagnosis and Treatment: A Comprehensive Approach. 1st ed. New York, McGraw Hill; (2000)
98. Feied CF: Venous Anatomy, in Weiss RA, Feied CF, Weiss MA (eds): Vein Diagnosis and Treatment: A Comprehensive Approach. 1st ed. New York, McGraw Hill; (2000)
99. Feied CF: Venous Physiology and Pathophysiology, in Weiss RA, Feied CF, Weiss MA (eds): Vein Diagnosis and Treatment: A Comprehensive Approach. 1st ed. New York, McGraw Hill; (2000)
100. Feied CF: Physiologic and Other Tests, in Weiss RA, Weiss MA, Feied, CF (eds): Vein Diagnosis and Treatment: A Comprehensive Approach. 1st ed. New York, McGraw Hill; (2000)
101. Feied CF: Surgery for Truncal Varicose Veins, in Weiss RA, Feied CF, Weiss MA (eds): Vein Diagnosis and Treatment: A Comprehensive Approach. 1st ed. New York, McGraw Hill; (2000)
102. Feied CF: Sclerosing Solutions, in Weiss RA, Feied CF, Weiss MA (eds): Vein Diagnosis and Treatment: A Comprehensive Approach. 1st ed. New York, McGraw Hill; (2000)
103. Feied CF: Thrombophlebitis and Venous Thromboembolism, in Weiss RA, Feied CF, Weiss MA (eds): Vein Diagnosis and Treatment: A Comprehensive Approach. 1st ed. New York, McGraw Hill; (2000)
104. Venous Anatomy and Physiology, in Fronek H (ed): Phlebology Primer. 1st ed. San Francisco, American College of Phlebology; 1999
105. Mechanism of Action of Sclerosing Solutions, in Fronek H (ed): Phlebology Primer. 1st ed. San Francisco, American College of Phlebology; 1999
106. Feied CF and Handler JA: Pulmonary Embolism, in Adler J, Plantz S (eds) Emergency Medicine, 1st ed. Boston, Boston Medical Publishing; 1998
107. Feied CF and Handler JA: Thrombolytic Therapy, in Adler J, Plantz S (eds) Emergency Medicine, 1st ed. Boston, Boston Medical Publishing; 1998
108. Feied CF and Handler JA: Superficial Thrombophlebitis, in Adler J, Plantz S (eds) Emergency Medicine, 1st ed. Boston, Boston Medical Publishing; 1998
109. Feied CF and Handler JA: Septic Thrombophlebitis, in Adler J, Plantz S (eds) Emergency Medicine, 1st ed. Boston, Boston Medical Publishing; 1998

110. Feied CF: Pulmonary Embolism, in Rosen P, Barkin RM (eds): Emergency Medicine: Concepts and clinical practice. 4th ed. St. Louis, Mosby Year Book; 1997
111. Feied CF: Venous disease of the extremities, in Rosen P, Barkin RM (eds): Emergency Medicine: Concepts and clinical practice. 4th ed. St. Louis, Mosby Year Book; 1997
112. Feied CF: Pulmonary embolism and thrombophlebitis, in Rund DA, Rosen P, Barkin RM, Sternbach GL (eds): Essentials of Emergency Medicine. 2nd ed. St. Louis, Mosby Book Co. 1996
113. Feied CF: Deep vein thrombosis and hypercoagulable states. Year Book of Dermatologic Surgery. St. Louis, Mosby Year Book; 1995
114. Feied CF: Pulmonary chest pain, cor pulmonale, and pulmonary thromboembolism, in Aufderheide T, Gibler B (eds): Emergency Cardiac Care. New York, Mosby Year Book Co. 1994:243-303.
115. Feied CF: Pulmonary Embolism, in Rosen P, Barkin RM (eds): Emergency Medicine: Concepts and clinical practice. 3rd ed. St. Louis, Mosby Year Book; 1992:1285-1311.

Papers In Submission

116. Feied CF, Smith MS, Handler JA, Gillam M, Kanhouwa M, Yarnold P: Novel Antimicrobial Surface Coatings And The Potential For Reduced Fomite Transmission Of SARS And Other Pathogens.
117. Feied CF, Shannon T, Smith MS, Handler JA, Gillam M, Kanhouwa M: Wireless handheld computer access to an Electronic Patient Record improves availability of clinical data in 25 percent of daily rounds.
118. Handler JA, Feied CF, Sundaram J, Yarnold P, Gillam M, Adams JG, Soltysik RC: A computerized algorithm for predicting admission at the time of emergency department triage.

Invited Lectures and Symposia

1. Innovation in Health Data Aggregation and Presentation: TEPR keynote, Palm Springs, CA; January 2009
2. Technology and Healthcare – A Look To The Future: EMTech invited presentation, Boston, MA: September, 2008
3. Change & Innovation in Health: Harvard Business School Invited Lecture, Boston, MA: April 2008
4. Local and Regional Data Aggregation: Special Briefings for SingHealth and National Health, Singapore: May 2007
5. Convergence – Health IT and Performance: ACEP Leadership & Advocacy Conference, Washington, DC: May 2007
6. Managing Change: Harvard Business School Invited Lecture, Boston, MA: May 2007
7. Biophysics and Information Management for Healthcare: Department of Physics, Georgetown University: April 2007
8. Update on Federal Project ER One: Controversies in Medicine, Barcelona, Spain: July, 2006
9. Biothreat Readiness: Paladin Annual Conference, Washington, DC: June, 2006
10. Data Systems in Medicine: Invited Briefing for Directors of British Telecom, Washington, DC: June, 2006
11. Design Considerations for Emergency Readiness: Princeton University / New Jersey State Hospital Association, Princeton, NJ: June, 2006
12. Technology, Design & Process -- The Future of Emergency Medicine: Leadership Conference of the American College of Emergency Physicians, Washington, DC: May, 2006
13. Advanced Information Systems for Medical Applications: Invited Briefing for the Tanaiste of Ireland, Washington, DC: May, 2006
14. Data Systems in Medicine: Invited Briefing for the Queensland Medical Directorate, Washington, DC: May, 2006
15. Update on ER One and related projects: Invited Briefing to the House and Senate, Washington, DC: May, 2006
16. Managing Change in Medicine: Harvard Business School, Boston, MA: April, 2006
17. ER One and Project Sentinel: Controversies in Medicine Midwinter Conference, Snowbird, Utah: January 2006
18. The HIX-1 Health Information Exchange and the future of Emergency Medicine (proxy): Annual PAACEP EDIS meeting, Scottsdale, AZ: December 2005
19. Data-sharing in Specialty Medicine: Alliance of Specialty Medicine, Washington, DC: November 2005
20. Project ER One and the National Capital Regional Health Exchange: Special briefing for the City Administrator, Washington, DC: October 2005
21. Designing the Hospital of the Future: American Academy of Pediatrics Annual Meeting, Washington DC: October 2005
22. Information Science in Healthcare: Keynote Address, 50th Anniversary Meeting, Association of Information Technology Professionals, Washington, DC : September 2005
23. Health Systems Planning in the Nation's Capital: special Rand Corp briefing for DC Dept of Health Planning Program: July 2005
24. Regional Integrated Clinical Repositories: Voluntary Hospital Association Meeting, Trevese, PA: July, 2005
25. Advanced Technologies: Implications for Future ED Designs: Harvard Graduate School of Design, Boston, MA: July 2005
26. Designing the Emergency Department of the Future: Harvard Graduate School of Design, Boston, MA: July 2005
27. Federal Project ER One: United States Senate Briefing, Russell Senate Office Building, Washington, DC: June 2005
28. Federal Project ER One: United States House of Representatives Briefing, Cannon House Office Building, Washington, DC: June 2005
29. Project Sentinel Update: National Library of Medicine, HPC site review, Washington, DC: June, 2005

30. Medical Readiness - prevent, defend, cope, and recover: Keynote Address, Paladin LP, Washington, DC: May, 2005
31. Technology and Medicine: ABS Capital Partners Annual Meeting, Washington, DC: May, 2005
32. International Standards for Phlebology reporting and research: UIP consensus committee, Paris, France: May, 2005
33. National Capital Area Regional Health Organization: Board of Trade Briefing, Washington, DC: April, 2005
34. Sentinel, ER One, and Azyxxi: Board of Directors, Voluntary Hospital Association, Princeton, NJ: April, 2005
35. Information Technology and Managing Change: Harvard Business School, Boston, MA: April, 2005
36. Thermodynamic Properties Governing Micelle Formation in Fatty Alcohols as Used for Sclerotherapy: Regional Symposium, American College of Phlebology, New Orleans, LA: April, 2005
37. Advanced Research Projects in Clinical Informatics: Controversies in Medicine, Vail, Colorado: March, 2005
38. Federal Project ER One: Special Briefing, Dupont Consortium Group, Washington, DC: February, 2005
39. Best Practices in Large Data Systems: True North - The Advisory Board Company, Washington, DC: February, 2005
40. Hospital Preparedness in the Nation's Capital: Special Briefing, HRSA-NBHP director, Washington, DC: February, 2005
41. Biosurveillance and Situational Awareness in the Nation's Capital: Special Briefing, Japanese Ministry of Health delegation, Washington, DC: February, 2005
42. Federated Clinical Data Aggregation Systems: State of the Art: Special Executive Council Briefing, American College of Emergency Physicians, Washington, DC: February, 2005
43. Data Systems for a Regional Health Exchange: DC Primary Care Association, Washington, DC: January, 2005
44. Data-based Situational Awareness and Project Sentinel: Infectious Disease Working Group, National Science Foundation, Washington, DC: December 2004
45. Situational Awareness: Sentinel and the National Biosurveillance Testbed: American College of Emergency Physicians, PAA CEP EDIS Conference, Chicago, IL: December 2004
46. Instant Data Everywhere, Emergency Care - Preparing for the Future: Voluntary Hospital Association (VHA), New Orleans, LA: November 2004
47. Federal Project ER One and Sentinel, Emergency Care - Preparing for the Future: Voluntary Hospital Association (VHA), New Orleans, LA: November 2004
48. Mechanism of action of endovenous sclerosing solutions: Annual Congress, American College of Phlebology, Marco Island, FL: November 2004
49. The Azyxxi Data System: An Overview: MedStar Information Systems Annual Meeting, Columbia, MD: November 2004
50. Panel Chair: Data Visualization, Robotics, Gesture Recognition, and other Advanced Technologies for Emergency Medicine: Informatics Section, Annual Congress, American College of Emergency Physicians, San Francisco, CA: October 2004
51. Hospital and Emergency Medicine Data Systems: Special briefing, Chair, Subcommittee on Pediatric Emergency Care, Institute of Medicine, Washington, DC: October 2004
52. Data in Emergency Medicine: Special briefing, Agency for Healthcare Research and Quality, Washington, DC: September 2004
53. Emergency Preparedness: An Overview, Symposium on Healthcare Design, Las Vegas, Nevada: September 2004
54. Regional Data Systems for a Regional Health Information Organization: Wisconsin Health Information Infrastructure Group, Milwaukee, WI: September 2004
55. Project ER One, the ER One Institutes, Sentinel, and the Azyxxi Data Repository: Special briefing for Julie Gerberding, Director, United States Centers for Disease Control, Washington, DC: September 2004
56. Information management and Federal Project ER One: Trauma-EMS Conference, Washington, DC: September 2004
57. Project ER One, the ER One Institutes, Sentinel and the Azyxxi Data Repository: Special briefing for Mitretek Board, Washington, DC: September 2004
58. Instant Information Access in the Digital Hospital, Keynote Address: Chinese National Conference on the Digital Hospital, Beijing, China: September 2004
59. Project ER One, the ER One Institutes, Sentinel, and the Azyxxi Data Repository: Special briefing, United States Dept of Agriculture, Washington, DC: August 2004
60. Modeling Hospital Data and Designs for Enhanced Emergency Care Operations: St Joseph's Hospital, Tampa, FL: June 2004
61. Informatics and Emergency Medicine, Keynote Address: Consensus Conference 2004, Society for Academic Emergency Medicine, Orlando, FL: May 2004
62. Managing Change: Innovation, Informatics and Change in Healthcare: Guest lecture, Rosabeth Moss Kanter course, Harvard Business School, Boston, MA: April, 2004
63. State of the Art Clinical Information Systems: McGill University Health Challenge, Montreal, Quebec, Canada: April, 2004
64. Mechanism of action of endovenous sclerosing solutions: Regional Symposium, American College of Phlebology, Denver, Colorado: April 2004
65. Project ER One, the ER One Institutes, Sentinel, and the Azyxxi Data Repository: Private briefing for Deputy Secretary Blitzer, United States Dept of Health and Human Services, Washington, DC: March 2004
66. Project ER One, the ER One Institutes, Sentinel, and the Azyxxi Data Repository: Special briefing, United States Dept of Homeland Security, Washington, DC: March 2004
67. Informatics and ED Design for Bioterrorism Readiness: Outpatient Care Institute, Washington, DC: March 2004

68. Project ER One, the ER One Institutes, and the Azyxxi Data Repository: Private briefing for White House Homeland Security Council, Washington, DC: March 2004
69. Project ER One: Briefing for Public Safety Committee, NCA Council of Governments, Washington, DC: February 2004
70. Project ER One and the ER One Institutes: Private briefing for Secretary Thompson, United States Dept of Health and Human Services, Washington, DC: March 2004
71. Emergency Facility Design: Lessons from Project ER One: Harvard University Graduate School of Design, Executive Education Division, Boston, MA: February 2004
72. Project ER One: Briefing for Health Committee, NCA Council of Governments, Washington, DC: February 2004
73. Federal Project ER One: Controversies In Medicine, Midwinter Meeting, Vail, CO: January 2004
74. Emergency Facility Design Issues for Emergency Readiness: Graduate Course on Chemical Terrorism & Consequence Management, Uniformed Services University of Health Sciences , Bethesda, MD: December 2003
75. Project ER One: Emergency Readiness and the National Crisis in Surge Capacity: American College of Emergency Physicians, PAACEP EDIS Conference, New Orleans, LA: December 2003
76. National Biosurveillance Testbed: The Need For Situational Awareness: American College of Emergency Physicians, PAACEP EDIS Conference, New Orleans, LA: December 2003
77. National Health Information Infrastructure: The Right Way: HIMSS- NCA, Washington, DC: November, 2003
78. Information Management and Federal Project ER One: Regional Implications: Georgetown University Senior Executive Seminar on Health Information Management, Washington, DC: October, 2003
79. Ubiquitous Data Systems and Emergency Readiness: Federal Project ER One/ Hospital One: ACEP Informatics, Boston, MA: October, 2003
80. The Impact of Data Access on Departmental Performance: TEPR, San Antonio, TX: May, 2003
81. The All-Risks-Ready Hospital: Guiding Principles for Facility Design: ER One Symposium, Washington, DC: May, 2003
82. Disaster Scalability and Consequence Management: ER One Symposium, Washington, DC: May, 2003
83. Critical Role of Ubiquitous Data Access for Hospital Preparedness: ER One Symposium, Washington, DC: May, 2003
84. Clinical Information Systems – The Right Way: World Research Group, Boston, MA: April, 2003
85. Instant Access to Clinical Data : American College of Emergency Physicians, Maryland, Baltimore, MD: April, 2003
86. Introducing Radical Change in Hospital Systems: Harvard Business School, Boston, MA: April, 2003
87. ER One, Hospital One: Hospital Design for the Age of Terrorism: American Burn Association, Miami, FL: April, 2003
88. Data-driven Solutions for Hospital And Emergency Department Overcrowding: Joint Commission for the Accreditation of Hospitals, Boston, MA: February, 2003
89. New Approaches to Pulmonary Thromboembolism: American Academy of Emergency Medicine, New Orleans, LA: February 2003
90. Large Clinical Datasets in Medicine: American Academy of Emergency Medicine, New Orleans, LA: February, 2003
91. Real Patients in a Virtual Hospital: MedStar Midwinter Conference, Whistler, CO: February, 2003
92. State-of-the-art Hospital Information Systems: University of Maryland, Baltimore, MD: January 2002
93. The Frontiers of Medical Computing: A Sneak Peek at the Future: EDIS, San Diego, CA: December 2002
94. Real Data in Virtual Environments: State of the Virtual ER Project: EDIS Symposium, San Diego, CA: December 2002
95. Overview of the ER One All-Risks-Readiness Project: ACEP Medical Informatics, San Diego, CA: December 2002
96. Sclerosing solutions in the treatment of venous reflux: , Annual Congress, American College of Phlebology, Fort Lauderdale FL: November 2002
97. The ER One Project and Biosurveillance: Emergency Medicine Management Symposium, Joint Commission for the Accreditation of Hospitals, Washington, DC: October, 2002
98. Future Developments in Medical Computing: 9th International EM Conference, Edinburgh, Scotland: June 2002
99. NGI Applications in Medical Education: Virtual Environments and Beyond: SAEM, St Louis, MO: May 2002
100. Data-Centric Computing and Process Transformation through Data Sharing: TEPR, Seattle, WA: May 2002
101. Data-centric Approach to Biosurveillance: Frontlines of Medicine, Washington DC: April 2002
102. Sclerosing solutions in modern practice: American College of Phlebology, Chicago, IL: April 2002
103. Design considerations for an all-risks-ready Emergency Department: American Society for Healthcare Engineering, Orlando, FL: March 2002
104. The Power of Instant Data: Florida Emergency Medicine Foundation, Orlando, FL: March 2002
105. Handheld Computing Devices in Medicine: MedStar Health Group Midwinter Conference, Courchevel, France: February 2002
106. Data-centric Computing: ED Information Systems Symposium, Las Vegas, NV: December 2001
107. Interfacing with the Rest of the Hospital And Beyond, American College of Emergency Physicians, Chicago, IL: October 2001
108. Sclerosing Solutions in Venous Medicine: Annual Congress of the American College of Phlebology, La Quinta, CA: November 2001
109. Sclerosing Solutions in Venous Medicine: Advanced Practical Course of the American College of Phlebology, Baltimore, MD: June 2001

110. Practical Venous Ultrasound: Advanced Practical Course of the American College of Phlebology, Baltimore, MD: June 2001
111. Advanced techniques in Phlebology: Endovascular Laser, Radiofrequency Ablation, and Stab-avulsion Phlebectomy with Tumescence Anaesthesia: Advanced Practical Course of the American College of Phlebology, Baltimore, MD: June 2001
112. Palmtop Medical Computing: MedStar Midwinter CME Conference, Snowmass, CO: Feb, 2001
113. Transforming Effect of Instant Access to Data in Medicine: Annual Symposium for Computers in Emergency Medicine, American College of Emergency Physicians, PA chapter, Philadelphia, PA: Jan 2001
114. Biometric Authentication For Mobile Medical Computing, MHG Symposium, 2001
115. Recurrent Superficial Venous Insufficiency After Saphenofemoral Ligation With Venectomy: Annual Congress of the American College of Phlebology, Atlanta, GA: November 2000
116. Duplex Ultrasound for Vascular Diagnosis: Annual Congress of the American College of Phlebology, Atlanta, GA: November 2000
117. Sclerosing Solutions in Superficial Venous Disease: Annual Congress of the American College of Phlebology, Atlanta, GA: November 2000
118. Deep Vein Thrombosis: Evidence Favoring Fibrinolytic Therapy: Annual Congress of the American College of Phlebology, Atlanta, GA: November 2000
119. Telemedicine in the Emergency Department: Scientific Assembly of the American College of Emergency Physicians, Philadelphia, PA: October 2000
120. Palmtop Computers in the Emergency Department: Scientific Assembly of the American College of Emergency Physicians, Philadelphia, PA: October 2000
121. Keynote: Transforming Medicine with Instant Data: Scientific Assembly of the American College of Emergency Physicians, Philadelphia, PA: October 2000
122. The Power of Data in Emergency Medicine: Cerner Conference on Medical Informatics, Kansas City, MO: October 2000
123. Deep Vein Thrombosis and Pulmonary Embolism: Emergency Medicine In Jackson Hole, Jackson Hole, WY: August 2000
124. Treatment of Venous Insufficiency: Regional Symposium of the American College of Phlebology, Delray Beach, FL: April 2000
125. Workshops in Duplex Ultrasound for Vascular Diagnosis: Regional Symposium of the American College of Phlebology, Delray Beach, FL: April 2000
126. Clinical Decision Support Systems in the Clinical Setting: MedStar Health Group Midwinter CME Conference, Telluride, CO: March, 2000
127. Performance Considerations and EAV Database Design, MD Technology Institute, 2000
128. Data in Medicine: Annual Symposium for Computers in Emergency Medicine, American College of Emergency Physicians, PA chapter, Philadelphia, PA: December 1999
129. Duplex Ultrasound for Vascular Diagnosis: Annual Congress of the American College of Phlebology, Scottsdale, AZ: November 1999
130. Sclerosing Solutions in Superficial Venous Disease: Annual Congress of the American College of Phlebology, Scottsdale, AZ: November 1999
131. Current Concepts in Deep Vein Thrombosis: Annual Congress of the American College of Phlebology, Scottsdale, AZ: November 1999
132. The Power of Instant Data in the Clinical Arena: Pushing the Diagnostic, Therapeutic, and Information Envelope: Symposium of the Emergency Medicine Cardiac Research and Education Group, at the Scientific Assembly of the American College of Emergency Physicians, Las Vegas, NV: October 1999
133. Sequelae of DVT and PE Treated with Anticoagulation vs Fibrinolysis: Pushing the Diagnostic, Therapeutic, and Information Envelope. Symposium of the Emergency Medicine Cardiac Research and Education Group, at the Scientific Assembly of the American College of Emergency Physicians, Las Vegas, NV: October 1999
134. Local Positioning Systems (LPS) in the Emergency Department: Industrial Advisory Group Conference, Bedford, MA: September 1999
135. The power of data in Emergency Medicine Management: Emergency Medicine Management Conference, Augusta, GA: June 1999
136. Sclerosing Solutions in Venous Medicine: Regional Symposium of the American College of Phlebology, Kansas City, MO: May 1999
137. Workshops in Duplex Ultrasound for Vascular Diagnosis: Regional Symposium of the American College of Phlebology, Kansas City, MO: May 1999
138. Emergency Telemedicine: Three Projects and a New Perspective: National Library of Medicine Health Information Infrastructure Annual Meeting & G7/G8 Forum on Clinical & Technical Quality and Standards for Telemedicine, Washington, DC: April, 1999
139. Transforming Emergency Medicine Research: Data acquisition & Management in the Emergency Department: Illinois College of Emergency Physicians Research Symposium, Chicago, Illinois: April, 1999
140. Current Management of Thromboembolic Disease: WHC Cardiovascular Research Foundation, Washington, DC: April, 1999

141. Clinical Information Systems in the Emergency Department: Maryland Society for Healthcare Information Systems Management Annual Meeting, Baltimore, MD: March, 1999
142. Design and Implementation of a Departmental Data Repository: Washington Hospital Center Midwinter CME Conference, Courchevel, France: February, 1999
143. Venous Thromboembolism: Washington Hospital Center Midwinter CME Conference, Courchevel, France: February, 1999
144. Deep Vein Thrombosis and Pulmonary Embolism: Medicine and Critical Care Grand Rounds, Washington Hospital Center, Washington, DC: January, 1999
145. A Data-Centric Model for Medical Computing: Implementation and Insight: Annual Symposium for Computers in Emergency Medicine, American College of Emergency Physicians, PA chapter, Philadelphia, PA: December 1998
146. Deep Vein Thrombosis and Pulmonary Embolism: Update on Diagnosis; Update on Treatment: Cardiovascular Emergencies and More, Scientific Assembly of the American College of Emergency Physicians, San Diego, CA: October 1998
147. A New Look At Venous Thromboembolism: Emergency Medicine Grand Rounds, The George Washington University School of Medicine, Washington, DC: August, 1998
148. Ubiquitous Connectivity and the Internet: Implications for Medicine: XVI Congress of the World Association for Social Psychiatry, Vancouver, British Columbia: August 1998
149. Emergency Medicine Informatics: a Data-Centric Model: Western Regional Conference in Emergency Medicine, Ashland, OR: August 1998
150. Pulmonary Thromboembolism: Facing the Reality: Western Regional Conference in Emergency Medicine, Ashland, OR: August 1998
151. Sclerotherapy: Solutions, Techniques, Pearls: Regional Symposium of the American College of Phlebology, Baltimore, MD: June 1998
152. Workshops in Duplex Ultrasound for Vascular Diagnosis: Regional Symposium of the American College of Phlebology, Baltimore, MD: June 1998
153. Emergency Medicine Informatics Research Panel: Annual Meeting of the Society for Academic Emergency Medicine, Chicago, IL: May, 1998
154. Advances in Telecommunications & The Next Generation Internet: Technology and Medicine symposium tutorial, The National Heart Attack Alert Program, National Library of Medicine and the National Heart, Lung and Blood Institute, National Institutes of Health, Bethesda, MD: April 1998
155. Fibrinolytic Therapy for Deep Vein Thrombosis and Pulmonary Embolism: Washington Hospital Center Midwinter CME Conference, Snowmass, CO: March, 1998
156. New Diagnostic and Treatment Modalities for Pulmonary Embolism and Deep Vein Thrombosis: Annual Congress of the American Academy of Emergency Medicine, St Petersburg, FL: February 1998
157. Technology and the Future of Medical Education: Department Chairs Strategic Session, Medlantic Healthcare Corporation, Washington, DC: December 1997
158. The NCEMI Data-Centric Model for Medical Computing: Annual Symposium for Computers in Emergency Medicine, American College of Emergency Physicians, PA chapter, Las Vegas, NV: December 1997
159. Workshops in Duplex Ultrasound for Vascular Diagnosis: Annual Congress of the American College of Phlebology, Palm Desert, CA: November 1997
160. Sclerosing Solutions in Superficial Venous Disease: Annual Congress of the American College of Phlebology, Palm Desert, CA: November 1997
161. Deep Vein Thrombosis: Case Study Panel: Annual Congress of the American College of Phlebology, Palm Desert, CA: November 1997
162. Emergency Medicine Informatics: A New Paradigm: Cardiovascular Emergencies and More, WHC Symposium, Scientific Assembly of the American College of Emergency Physicians, San Francisco, CA: October 1997
163. New Information Technologies: Leadership Role Of The Emergency Department: Annual meeting of the Section on Computer Science, Scientific Assembly of the American College of Emergency Physicians, San Francisco, CA: October 1997
164. Mechanism of Action of Sclerosing Solutions: Symposium in Phlebology, Chicago, Illinois: May 1997
165. Duplex Ultrasound Examination Of The Lower Extremities: Symposium in Phlebology, Chicago, Illinois: May 1997
166. On-Line Medical Information: From Medline To The World-Wide-Web: ACEP Clinical Forum, American College of Emergency Physicians, Charlotte, NC: April, 1997
167. Principles of Information Flow, Use, and Display: ACEP Clinical Forum, American College of Emergency Physicians, Charlotte, NC: April, 1997
168. Medical Information Via the Internet: Washington Hospital Center Annual Ski/CME Conference, Vail, Colorado, March 1997
169. Medical Resources on the Internet: Annual Symposium for Computers in Emergency Medicine, American College of Emergency Physicians, PA chapter, Philadelphia, PA: December 1996
170. Treatment of Superficial Venous Disease: Annual Congress of the North American Society of Phlebology, Washington, DC: November, 1996

171. Color-flow Duplex Ultrasound in the Diagnosis of Venous Disease: Annual Congress of the North American Society of Phlebology, Washington, DC: November, 1996
172. Diagnosis and Treatment of Deep Vein Thrombosis: 1996 Annual Congress, Interstate Postgraduate Medical Association, Washington, DC November, 1996
173. Questions and Answers in Thromboembolic Disease: 1996 Annual Congress, Interstate Postgraduate Medical Association, Washington, DC November, 1996
174. Rheumatology, Immunology, and Allergy: 1996 Scientific Assembly, American Academy of Emergency Medicine, Las Vegas, Nevada: September 1996
175. The Internet, Clinical Informatics, and the future of Emergency Medicine: Cardiovascular Emergencies and More: Pushing the Envelope, WHC Symposium, Scientific Assembly of the American College of Emergency Physicians, New Orleans, LA: September 1996
176. Connectivity and Emergency Medicine on the Internet: Grand Rounds, Emergency Medicine, Johns Hopkins University Medical Center, Baltimore, MD: May 1996
177. Thermodynamic Determinants of Detergent Micellar Bioaggregation: Annual Congress of the North American Society of Phlebology, San Diego, CA: February, 1996
178. New Concepts in Phlebology: Symposium on Venous Disease, 53rd Annual Meeting, American Academy of Dermatology, Washington, DC: February, 1996
179. Mechanism of Action of Sclerosing Solutions: Tenth Special Regional Symposium in Phlebology, New York, NY: November 1995
180. Biochemical Action Of Sclerosing Agents: Annual Scientific Meeting of the Australian Phlebology Society, Queensland, Australia: October 1995 (proxy)
181. Venous Thrombosis: Risk factors: Annual Scientific Meeting of the Australian Phlebology Society, Queensland, Australia: October 1995 (proxy)
182. Management of the Acute Anaphylactic Reaction: Annual Scientific Meeting of the Australian Phlebology Society
183. Queensland, Australia: October 1995 (proxy)
184. The Internet and Computer Connectivity for Phlebologists: Annual Scientific Meeting of the Australian Phlebology Society, Queensland, Australia: October 1995 (proxy)
185. Pathophysiology and Sequelae of Venous Disease: Annual Scientific Meeting of the Australian Phlebology Society, Queensland, Australia: October 1995 (proxy)
186. Medicine Wagon on the Information Superhighway: The View From The Trenches: Discussant at The George Washington University Distinguished Speaker Series, Washington, DC: September 1995
187. Emergency Medicine Resources on the Internet: Cardiovascular Emergencies and More: Pushing the Envelope, GWU Medical Center Symposium, Scientific Assembly of the American College of Emergency Physicians, Washington, DC: September, 1995
188. The Internet and Emergency Medicine: Historical perspective and modern framework: Grand Rounds, Emergency Medicine, George Washington University Medical Center, Washington, DC: September, 1995
189. Deep Vein Thrombosis: International Perspective Panel: Annual Congress of the North American Society of Phlebology, Fort Lauderdale, FL: February 1995
190. Mechanism of Action of Sclerosing Solutions: Annual Congress of the North American Society of Phlebology, Fort Lauderdale, FL: February 1995
191. Nouvelles Technologies Pour la Recherche Médicale: Congress Annuelle de la Fondation Marocaine de Recherche Médicale, Casablanca, Morocco: December 1994
192. The Internet as a Tool for Research In Emergency Medicine: Council of Teaching Hospitals Conference on Emergency Medicine Research, Mohonk Mountain House, New Palz, NY: November 1994
193. Venous Thrombosis and Pulmonary Embolism: Indications for Thrombolysis: Grand Rounds, Yale University Medical Center, New Haven, CT: November 1994
194. Current Concepts in Pulmonary Thromboembolic Disease: Medicine Grand Rounds, George Washington University Medical Center, Washington, DC: September 1994
195. Emergency Physicians and The Internet: Advances in Cardiovascular /Emergency Medicine, GWU Medical Center Symposium, Scientific Assembly of the American College of Emergency Physicians, Orlando, Florida: September 1994
196. Diagnostic and Therapeutic Strategies in Pulmonary Thromboembolism: Spectrum Directors' Annual Meeting, Amelia, Florida: June 1994
197. The National Heart Attack Alert Project: Emergency Medicine Update, Norfolk, Virginia: June 1994
198. Information Superhighway, 1994: The Internet: First Annual Conference on Emergency Medicine Informatics, Washington, DC: May 1994
199. The Golden Hour in Acute MI: Findings and Recommendations of the National Heart Attack Alert Project: Issues in Cardiovascular Care 1994, Annapolis, Maryland: April 1994
200. Deep Vein Thrombosis: Evidence In Favor of Thrombolysis: Grand Rounds, Seton Medical Center, Austin, Texas: March 1994

201. Epidemiology and Sequelae of Chronic Venous Insufficiency: Annual Congress, North American Society of Phlebology, Maui, Hawaii: February, 1994
202. Deep Vein Thrombosis: The Risks of Sclerotherapy: Annual Congress, North American Society of Phlebology, Maui, Hawaii: February, 1994
203. Venous Anatomy and Physiology: Symposium on Varicose and Telangiectatic Leg Veins, 52nd Annual Meeting, American Academy of Dermatology, Washington, DC: December, 1993
204. L'Importance de la Connectivité Pour Soutenir la Recherche Médicale: Premières Journées de la Fondation Marocaine de Recherche Médicale, Casablanca, Morocco: November, 1993
205. Developing an Ongoing Program of Medical Research: Premières Journées de la Fondation Marocaine de Recherche Médicale, Casablanca, Morocco: November, 1993
206. Emergency Management of Blocked and Clotted Catheters, Arteries, and Veins: Advances in Cardiovascular /Emergency Medicine, GWU Medical Center Symposium, Scientific Assembly of the American College of Emergency Physicians, Chicago, Illinois: October 1993
207. Computers and Technology in Medicine: Symposium on Computers and Society, Department of Electrical Engineering and Computer Sciences, George Washington University Medical Center, Washington, DC: April, 1993
208. Venous Disease: Diagnosis and Management: Grand Rounds, Department of Health Care Sciences, George Washington University Medical Center, Washington, DC: March, 1993
209. Venous Thromboembolism: Annual Congress, North American Society of Phlebology, Orlando, FL: February, 1993
210. Fibrinolytic Agents in Venous Thromboembolic Disease: Vascular Disease Forum, International Society for Education and Research in Vascular Disease, San Diego, CA: November, 1992
211. Risk Factors in Venous Thromboembolic Disease: Vascular Disease Forum, International Society for Education and Research in Vascular Disease, San Diego, CA: November, 1992
212. Neuroleptic Malignant Syndrome: Morbidity and Mortality case discussion, George Washington University Medical Center, Washington, D.C.: October, 1992
213. Pulmonary Embolism: what's new for 1993: GWU Medical Center Symposium, Scientific Assembly of the American College of Emergency Physicians, Seattle, Washington: September, 1992
214. Current Approaches to Malaria: Grand Rounds, Department of Emergency Medicine, George Washington University, Washington, D.C.: October, 1992
215. New Perspectives on Venous Thrombosis and Pulmonary Embolism: Grand Rounds, Department of Emergency Medicine, Providence Hospital, Washington, DC: June, 1992
216. Computer Slidemaking for Scientific Presentations: Introduction to Research (new GWU course), George Washington University Medical Center, Washington, DC: June, 1992
217. Modern Perspectives on Malaria: 43rd Military Medical-Surgical Clinical Congress, Willingen, Germany: May, 1992
218. Parasitosis: Update on Ascaris, 43rd Military Medical-Surgical Clinical Congress, Willingen, Germany: May, 1992
219. Definitive Management of Selected Hand Fractures, 43rd Military Medical-Surgical Clinical Congress, Willingen, Germany: May, 1992
220. Pulmonary Embolism Diagnosis and Treatment: Grand Rounds, York Hospital, York, Pennsylvania: April, 1992
221. Ventilation-Perfusion Scans and the PIOPED Trial: Benefits and Risks of Lytic Therapy for Pulmonary Embolism, GWU Medical Center Symposium, Scientific Assembly of the American College of Emergency Physicians, Boston, Massachusetts: October, 1991
222. Deep Venous Thrombosis and Pulmonary Embolism: Making the Diagnosis; The Role of Lytic Therapy in Treatment: Georgia ACEP 1991 Annual Meeting, Atlanta, Georgia: June, 1991
223. DVT and PE: Recent Data and New Approaches to Diagnosis and Treatment: Grand Rounds, Harrisburg Hospital, Harrisburg, Pennsylvania: May, 1991
224. Current Trends in the Diagnosis and Treatment of Pulmonary Thromboembolism: Grand Rounds, Carlisle Hospital, Carlisle, Pennsylvania: May, 1991
225. Venous Thrombosis and Pulmonary Embolism in the Emergency Department: Uniformed Services University of the Health Sciences Symposium, Washington, D.C.: May, 1991
226. New Approaches to the Diagnosis and Treatment of Venous Thromboembolism, Maryland Chapter, American College of Emergency Physicians, Baltimore, Maryland: January, 1991
227. Lytic Therapy for Pulmonary Thromboembolism: Indications and Contraindications: Grand Rounds, Department of Health Care Sciences, George Washington University Medical Center, Washington, D.C.: October, 1990
228. Diagnosis and Treatment of Pulmonary Thromboembolism: Grand Rounds, Department of Emergency Medicine, George Washington University Medical Center, Washington, D.C.: October, 1990
229. Deep Vein Thrombosis and Pulmonary Thromboembolism: 1990 Scientific Assembly, American College of Emergency Physicians, San Francisco, California: September, 1990
230. Practical Applications in Data Management for Epidemiology: Principles of Injury Epidemiology, School of Medicine, George Washington University, Washington, D.C.: April, 1990
231. Pulmonary Thromboembolism: A Review: Pitfalls and Pearls in Emergency Medicine, Sun Valley, Idaho: February, 1990

232. Hand Injuries: Definitive Care in the Emergency Department: Pitfalls and Pearls in Emergency Medicine, Sun Valley, Idaho: February, 1990
233. Computer Applications in Emergency Medicine: Pitfalls and Pearls in Emergency Medicine, Sun Valley, Idaho: February, 1990
234. On-line Resources for the medical profession: Medical Computer Users' Group, Washington, D.C.: April, 1989
235. Computer Applications in Emergency Medicine: Pitfalls and Pearls in Emergency Medicine, Sun Valley, Idaho: February, 1989
236. Intestinal Parasites: Diagnosis and Management: Pitfalls and Pearls in Emergency Medicine, Sun Valley, Idaho: February, 1989
237. Medical Database Management: An Integrated Approach: World of Computers Seminar presentation, Washington, D.C.: April, 1988
238. Twenty-First Century Technology: Seminar on the Information Age, George Washington University, Washington, D.C.: June, 1987
239. Advanced CP/M Assembly Language Techniques: SANDOUG Conference Presentation, San Diego, California: June, 1982

Clubs

The Cosmos Club
The Historic George Town Club
The City Tavern Club
The University Club of Washington DC
The George Washington University Club
The City Club of Washington
The Tower Club / The Capital Society of Clubs
International Wine and Food Society, DC Chapter
The Fairfax Club
Pisces

Miscellaneous

Interests include fine food and wine, yacht racing, skiing, opera, theatre, dance, songwriting and composition, complex adaptive systems theory, intelligent active control systems, and advanced technology of all types. Conversationally fluent in French with a reading knowledge of Italian. Experienced with programming in more than 30 computer languages, including Perl, Java, C++, C#, C, Modula-2, Delphi, Pascal, Forth, COBOL, FORTRAN, MUMPS, LISP, PILOT, many dialects of BASIC (including VB, R/BASIC and PICK/BASIC) DBASE, Clipper, and a variety of assembly languages. Extensive experience with design and implementation of object-oriented, distributed, multiuser, multitasking, and networked operating systems. Extensive experience with database design and implementation for a variety of medical and non-medical industries.