

May 7, 2018

CURRICULUM VITAE

Edward Hance Shortliffe, MD, PhD, MACP, FACMI

- [work] Professor, Department of Biomedical Informatics
Senior Advisor to the Dean, College of Health Solutions
Arizona State University, Phoenix, AZ
ted.shortliffe@asu.edu – <https://chs.asu.edu/edward-shortliffe>
- Adjunct Professor, Department of Biomedical Informatics
College of Physicians and Surgeons, Columbia University in the City of New York
edward.shortliffe@columbia.edu – <https://www.dbmi.columbia.edu/people/edward-shortliffe/>
- Adjunct Professor, Department of Healthcare Policy and Research (Health Informatics)
Weill Cornell Medical College, New York, NY
http://hpr.weill.cornell.edu/divisions/health_informatics/
- [home] 272 W 107th St #5B, New York, NY 10025-7833
Phone: 212-666-8440 — Mobile: 917-640-0933
ted@shortliffe.net – <http://www.shortliffe.net>

Born: Edmonton, Alberta, Canada
Date of birth: 28 August 1947
Citizenship: U.S.A. (naturalized - 1962)
Spouse: Vimla L. Patel, PhD

Education

From	To	School/Institution	Major Subject, Degree, and Date
9/62	6/65	The Loomis School, Windsor, CT.	High School
9/65	7/66	Gresham's School, Holt, Norfolk, U.K.	Foreign Exchange Student
9/66	6/70	Harvard College, Cambridge, MA.	Applied Math and Computer Science, A.B., June 1970
9/70	1/75	Stanford University, Stanford, CA	PhD, Medical Information Sciences, January 1975
9/70	6/76	Stanford University School of Medicine	MD, June 1976.
7/76	6/77	Massachusetts General Hospital, Boston, MA	Internship in Internal Medicine
7/77	6/79	Stanford University Hospital, Stanford, CA	Residency in Internal Medicine

Honors

- Graduation Magna Cum Laude, Harvard College, June 1970
- Medical Scientist Training Program (MSTP), NIH-funded Stanford Traineeship, September 1971 - June 1976
- Grace Murray Hopper Award (Distinguished computer scientist under age 30), *Association for Computing Machinery*, October 1976
- Research Career Development Award, *National Library of Medicine*, July 1979—June 1984
- Henry J. Kaiser Family Foundation Faculty Scholar in General Internal Medicine, July 1983—June 1988
- Young Investigator Award, *Western Society for Clinical Investigation*, February 1987

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Elected Member, National Academy of Medicine (formerly Institute of Medicine), *National Academies of Sciences, Engineering, and Medicine*, 1987

Elected Fellow, *Association for the Advancement of Artificial Intelligence (AAAI)*, 1990

Master, *American College of Physicians*, November 2002

National Associate, *National Academies of Sciences, Engineering, and Medicine*, Washington, DC, December 2004

Appointed Rolf H. Scholdager Professor of Biomedical Informatics, *Columbia University*, June 2005

Morris F. Collen Award for Distinguished Contributions to Medical Informatics, *American College of Medical Informatics (ACMI)*, November 2006

Selected as "Phoenix 50 Influential Leader", *Phoenix Business Journal*, October 2007

Listed annually in *Who's Who in America*

Commencement Speaker and Honorary Doctor of Science, *State University of New York, Downstate Medical Center*, May 2013

Elected Founding Member, International Academy of Health Sciences Informatics (IAHSI), International Medical Informatics Association, May 2017

Marquis Who's Who Lifetime Achievement Award, May 2017

Convocation Speaker and Honorary Doctorate, Telfer School, University of Ottawa, Ottawa, Ontario, Canada, June 2017

Licensure

National Board of Medicine Examiners, USMLE #31441348, Certified April 1977

California State Medical Board, License G-035737, September 1977— (inactive since 2009)

Arizona Medical Board, License #37630, October 2007 – (inactive since 2012)

Diplomate, American Board of Internal Medicine, Certificate #073613, September 1979 (unlimited)

Named Lectureships

October 1983 Kauffman Memorial Lecture, College of Pharmacy, Ohio State University, Columbus, Ohio

March 1985 Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences, UCLA, Los Angeles, California.

May 1985 Joseph Leiter Lecture, Annual Meeting, Medical Library Association, New York, New York

February 1987 Young Investigator Award Lecture, Western Society for Clinical Investigation, Carmel, CA.

February 1988 George and Sandra Forsythe Memorial Lectures, Computer Science Department, Stanford University, Stanford, California.

April 1988 Audio-Digest Annual Lectureship, Congress on Continuing Medical Education, Los Angeles, California.

June 1994 19th Annual Eugene Pendergrass Lectureship, Department of Radiology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

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May 1996 Hurst Brown Professorship, Toronto General Hospital, University of Toronto, Toronto, Ontario.

October 1995 Richard M. Polaschek Lectureship in Medical Informatics, Johns Hopkins University School of Medicine, Baltimore, Maryland.

May 1996 C. Everett Koop Lectureship in Medical Informatics, Dartmouth University School of Medicine, Hanover, New Hampshire.

April 1997 Cosgrove Lecture, Annual Clinical Meeting, American College of Obstetrics and Gynecology, Las Vegas, Nevada.

April 1997 Marsden S. Blois Lectureship in Medical Informatics, University of California San Francisco, San Francisco, California.

June 1998 Donald AB Lindberg Lecture in Medical Informatics, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania

September 2005 Priscilla Mayden Lecture, Midcontinental Meeting of the Medical Library Association, University of Utah, Salt Lake City, Utah

February 2007 James Coward Lecture, Symposium on Information Technology and Communications in Health, University of Victoria, Victoria, British Columbia

September 2007 Shirley Agnos Arizona Town Hall Lecture, Phoenix, Arizona

June 2008 Ted and Janice Smith Distinguished Lecture, University of California Irvine, Irvine, California

March 2009 John Dickmeyer Lecture, Renal Physicians Association Meeting, Baltimore, MD

October 2009 Julius S. Aronofsky Lecture, UT Southwestern School of Medicine, Dallas, TX

October 2011 Antonija Prelec Memorial Lecture, School of Medicine, Stony Brook University, Stony Brook, NY.

March 2016 Crawford Long Lectureship, Department of Anesthesiology. Emory School of Medicine, Atlanta, GA.

Employment, Research, and Academic Positions

2016— Senior Physician Executive Consultant, IBM Watson Health, Cambridge, MA (part-time)

2013— Adjunct Professor of Healthcare Policy and Research (Division of Health Informatics), Weill Cornell Medical College, New York, NY

2013— Member, Center for Healthcare Informatics and Policy (CHiP), Weill Cornell Medical College, New York, NY

2012— Professor of Biomedical Informatics and Senior Advisor to the Dean and Executive Vice Provost, College of Health Solutions, Arizona State University, Phoenix, AZ

2012—2017 Scholar in Residence, New York Academy of Medicine, New York City

2009—2012 President and Chief Executive Officer, American Medical Informatics Association, Bethesda, Maryland

2009—2012 Adjunct Professor, Department of Biomedical Informatics, Arizona State University, Scottsdale, AZ.

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2009—2011 Professor of Biomedical Informatics, School of Biomedical Informatics, University of Texas Health Sciences Center at Houston, Houston, Texas

2009 Affiliated Professor, School of Life Sciences, Arizona State University, Tempe, Arizona

2007—2009 Professor of Biomedical Informatics, School of Computing and Informatics, Fulton School of Engineering, Arizona State University, Phoenix, Arizona

2007—2009 Professor of Basic Medical Sciences, University of Arizona College of Medicine – Phoenix, in partnership with Arizona State University

2007—2009 Professor of Medicine, University of Arizona College of Medicine

2007—2008 Physician Member, University Physicians' Healthcare, Tucson, Arizona

2007—2008 Founding Dean, University of Arizona College of Medicine – Phoenix, in partnership with Arizona State University

2007— Adjunct Professor of Biomedical Informatics, College of Physicians and Surgeons, Columbia University

2005—2007 Rolf H. Scholdager Professor and Chair, Department of Biomedical Informatics, College of Physicians and Surgeons, Columbia University

2002—2007 Deputy Vice President for Information Technology (Columbia University Medical Center) and Senior Associate Dean for Information Technology (College of Physicians and Surgeons), Columbia University

2000— Editor-in-Chief, *Journal of Biomedical Informatics*, Elsevier Science (formerly Academic Press)

2000—2005 Professor and Chair, Department of Biomedical Informatics, College of Physicians and Surgeons, Columbia University

2000—2007 Professor of Medicine, College of Physicians and Surgeons, Columbia University

2000—2007 Professor of Computer Science (by courtesy), College of Engineering, Columbia University

2000—2007 *Director*, Center for Advanced Information Management (NYSTAR-funded Center for Advanced Technology), New York Science and Technology Academic Research Program, Columbia University

2000—2007 Director, Medical Informatics Services, New York Presbyterian Healthcare System

2000—2002 Associate Vice President for Strategic Information Planning, Health Sciences Division, Columbia University

1995—2000 Associate Dean for Information Resources and Technology, Stanford University School of Medicine

1994—1995 Fellow, Center for Advanced Studies in the Behavioral Sciences, Stanford University.

1993—1995 Associate Chair of Medicine for Primary Care, Department of Medicine, Stanford University School of Medicine.

1992— 1997 Principal Investigator, CAMIS Computing Resource (National Library of Medicine), Stanford University, Stanford, California.

1990—2000 Professor of Medicine (General Internal Medicine and, after 1995, Medical Informatics), Stanford University School of Medicine, Stanford, California.

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- 1990— 2000 Professor of Computer Science (by courtesy), Stanford University, Stanford, California.
- 1990— 1997 Director, Center for Advanced Medical Informatics at Stanford (CAMIS), Stanford University, Stanford, California.
- 1988—1993 Co-Director, Training Program in Health Services Research, Division of General Internal Medicine, Stanford University School of Medicine, Stanford, California.
- 1988—1995 Chief, Division of General Internal Medicine, Department of Medicine, Stanford University School of Medicine, Stanford, California.
- 1988—1993 Head, Section on Medical Informatics, Department of Medicine, Stanford University School of Medicine, Stanford, California.
- 1985—1990 Associate Professor of Medicine (General Internal Medicine), Stanford University School of Medicine, Stanford, California.
- 1985—1990 Associate Professor of Computer Science (by courtesy), Stanford University, Stanford, California.
- 1985—1992 Principal Investigator, SUMEX-AIM Computing Resource (Division of Research Resources and National Library of Medicine, NIH), Stanford University, Stanford, California.
- 1981—2000 Director, Medical Information Sciences Training Program, Stanford University, Stanford, California.
- 1986—1987 Visiting Associate Professor of Medicine and of Computer and Information Sciences, University of Pennsylvania, Philadelphia, Pennsylvania.
- 1980—1985 Co-Principal Investigator and Medical Liaison, SUMEX-AIM Computing Resource, Stanford University, Stanford, California.
- 1979—1985 Assistant Professor of Computer Science (by courtesy), Stanford University, Stanford, California.
- 1979—1985 Assistant Professor of Medicine (General Internal Medicine), Stanford University School of Medicine, Stanford, California.
- 1971—1975 Doctoral Research, Medical Scientist Training Program, Stanford University School of Medicine, Stanford, California (Preceptor: Stanley N. Cohen, M.D.)
- 1970—1971 System Designer, Automated Health Systems, Inc.; Burlingame, California and Wakefield, Massachusetts (summer employment).
- 1968—1969 Research Assistant, Laboratory of Computer Science, Massachusetts General Hospital, Boston, Massachusetts (Preceptors: Robert A. Greenes, M.D., Ph.D. and G. Octo Barnett, M.D.)

Committees, Boards, and Consultancies

- 2018—2021 Chair, Membership Committee, *National Academy of Medicine*, Washington, DC
- 2017 Consultant in Biomedical Informatics, School of Medicine, *SUNY Upstate Medical University*, Syracuse, New York
- 2017— Advisory Board, US Pharma Studies, Inc., Tempe, AZ
- 2016— Consultant, IBM Watson Health, Inc.

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- 2016— Chair, *NAS Committee on Developing a Smarter National Surveillance System for Occupational Safety and Health in the 21st Century*, National Research Council, National Academies of Sciences, Engineering, and Medicine, Washington, DC.
- 2015— Member, Healthcare Advisory Board, *98point6, Inc.*, Seattle, WA.
- 2015 Consultant in Biomedical Informatics, Hood College, Frederick, MD
- 2014—2016 Member, Healthcare Advisory Board, QTS, Inc., Atlanta, GA
Formerly *Carpathia, Inc.*, Dulles, VA
- 2014—2015 Member, Healthcare Advisory Board, *Pxyl, Inc.*, Scottsdale, Arizona.
- 2013—2016 *Board of Trustees*, New York Academy of Medicine, New York, NY
(Vice Chair 2013-15)
- 2013—2014 Member, *Committee on Identifying and Prioritizing New Preventive Vaccines for Development* (Phase III), Institute of Medicine (now National Academy of Medicine), National Academies of Sciences, Engineering, and Medicine, Washington, DC.
- 2013 Consultant in the Evaluation of the Department of Public Health, *Weill Cornell Medical College*, New York, NY.
- 2013 Consultant in Research Cyberinfrastructure, *University of California San Diego*, San Diego, CA.
- 2013 Consultant in Biomedical Informatics, *Mayo Clinic*, Rochester, MN.
- 2012 Consultant in Biomedical Informatics, *University of Amsterdam Medical Center*, Amsterdam, the Netherlands
- 2012—2013 Member, *Committee on Developing a Decision-Support Tool for Prioritizing New Vaccines* (Phase II) [Report: *Ranking Vaccines: A Prioritization Software Tool*, October 2013], Institute of Medicine (now National Academy of Medicine), National Academies of Sciences, Engineering, and Medicine, Washington, DC.
- 2012—2018 Member, *Committee on National Statistics (CNSTAT)*, National Research Council, the National Academies of Sciences, Engineering, and Medicine, Washington, DC
- 2012 Consultant in Biomedical Informatics, *Georg-August-Universität*, Göttingen, Germany
- 2012—2015 External Advisory Board, *Center for Advanced Information Management (CAIM)*, New York State Center for Advanced Technology, Columbia University in the City of New York
- 2012— Advisory Board, *Health Record Banking Alliance*, Arlington, VA.
Chairman of the Board: 2013—
- 2011—2012 Consultant, *Committee on Developing a Decision-Support Tool for Prioritizing New Vaccines* (Phase I), Institute of Medicine (now National Academy of Medicine), National Academies of Sciences, Engineering, and Medicine, Washington, DC.
- 2011—2015 Section Liaison, Section 01 (Physical, Mathematical, Computer, Information, and Engineering Sciences), Membership Committee, *Institute of Medicine (now National Academy of Medicine)*, National Academies of Sciences, Engineering, and Medicine, Washington, DC [Section Chair, 2013-2015]
- 2011 Consultant in Biomedical Informatics, School of Medicine, *Stony Brook University*, Stony Brook, New York
- 2011—2013 Board of Directors, *Friends of the National Library of Medicine*, Washington, DC.

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- 2011 Consultant in Biomedical Informatics, *University of Rochester School of Medicine*, Rochester, NY
- 2011 Consultant in Biomedical Informatics, *University of Connecticut School of Medicine*, Storrs and Farmington, CT
- 2010— External Advisory Board, Clinical and Translational Science Institute, University of California San Diego, La Jolla, CA.
- 2010—2011 Chair, Committee on Future Information Architectures, Processes, and Strategies for the Centers for Medicare and Medicaid Services. *National Research Council*, National Academies of Sciences, Engineering, and Medicine, Washington, DC
- 2010 Consultant in Biomedical Informatics, School of Medicine, University of Cincinnati, Cincinnati, OH
- 2009—2013 External Advisory Board, Clinical and Translational Science Institute, University of Florida, Gainesville, FL.
- 2009—2011 Keck Faculty Affiliate, *Gulf Coast Consortium*, Houston, TX
- 2009—2015 Journal Oversight Committee, JAMA and the JAMA Network, *American Medical Association*, Chicago, IL (Chair 2012-2015)
- 2008—2009 Search Committee for Editor, *Annals of Internal Medicine*, American College of Physicians, Philadelphia, PA
- 2008 Consultant in Biomedical Informatics, *University of Florida School of Medicine*, Gainesville, FL
- 2008 Consultant in Biomedical Informatics, School of Medicine, *University of California Irvine*, Irvine, CA
- 2008 Consultant in Biomedical Informatics, School of Medicine, *University of California San Diego*, San Diego, CA
- 2007—2009 Member, Board of Directors, *The Wellness Community Central Arizona*, Phoenix, AZ
- 2007—2008 Member, Board of Directors, *Downtown Phoenix Partnership*, Phoenix, AZ
- 2006— External Advisory Board, Institute for Translational and Health Sciences, University of Washington (CTSA), Seattle, WA.
- 2006 Chair, Review Committee regarding the Computer Science and Telecommunications Board, Division of Engineering and Applied Sciences, *National Research Council*, Washington, DC
- 2004—2007 Member, Biomedical Informatics Advisory Committee, Center for Public Health Informatics, *Centers for Disease Control and Prevention*, Atlanta, GA
- 2005 Consultant in Biomedical Informatics, *University of Pennsylvania School of Medicine*, Philadelphia, PA
- 2005—2008 Consultant, Radiological Event Medical Management (REMM) Program, *Office of Mass Casualty Planning and Office of Public Health Emergency Preparedness (OPHEP)*, Department of Health and Human Services, Washington, DC
- 2005 Consultant in Biomedical Informatics, *Johns Hopkins University School of Medicine*, Baltimore, MD,
- 2005—2007 Member, Search Committee for a Director of the National Center for Public Health Informatics, *Centers for Disease Control and Prevention*, Atlanta, GA.

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2005—2006 Nominations Committee, *American College of Physicians*

2004—2007 Member of Oversight Committee, Division of Engineering and Physical Sciences (DEPS), *National Research Council*, Washington, DC

2004—2006 Member, Biomedical Informatics Expert Panel (BIEP), *National Center for Research Resources*, National Institutes of Health, Bethesda, MD

2004 External Review Committee (Advisory to the Director), Chief Information Officer and Director of the Center for Information Technology, National Institutes of Health, Bethesda, MD

2004 Chair, Advisory Committee on Health Information Technology, *Health Affairs*, New York, NY

2003—2007 Board of Directors (Member of Compensation Committee), *Medco Health Solutions, Inc.*, Franklin Lakes, NJ.

2003—2009 Advisory Committee, Office of Academic Computing, *Charles Drew Medical School*, Los Angeles, CA

2003—2009 Scientific Advisor, *Pritzker Consortium*, Chicago, IL

2013—2016
2003—2011 Board of Trustees, *New York Academy of Medicine*, New York, NY. (Chair of Library and Awards Committees; Chair of Program Planning Committee on Health Communication and Health Literacy; Vice-Chair, 2006-2011; Vice-Chair, 2013-2015; Search Committee for the President, 2006; Co-Chair, Nominations Committee of the Board, 2014-present)

2002—2006 Member, External Advisory Board, *Center for Information Technology Leadership (CITL)*, Partners Health and Harvard Medical School, Boston, MA.

2002—2004
2008—2010 Committee on National Need for Biomedical, Behavioral, and Clinical Sciences Researchers, *National Research Council*, National Academies of Sciences, Engineering, and Medicine, Washington, DC

2002—2003 Chair, Steering Committee on Electronic Scientific, Technical, and Medical Journal Publishing and Its Implications, *National Academies of Sciences, Engineering, and Medicine*, Washington, DC

2002—2003 Special Advisor and Member of the Board, *eHealth Initiative*, Washington, DC

2002—2003 Member, Health Communications Initiative Program Committee, *ACP Foundation*, Philadelphia, PA.

2001—2007 Member, Advisory Panel, *Pediatric Emergency Northeast Team (PEDNET)*, Regional Node of the National Pediatric Emergency Care Applied Research Network (PECARN).

2001—2003
2005—2007 Member, Committee on Science, Engineering, and Public Policy (COSEPUP), *National Academy of Sciences*, Washington, D.C.

2001—2003
2005—2007 Elected Member, Executive Council, Institute of Medicine (IOM), *National Academy of Sciences*; Member of the Finance Subcommittee (Chair, 2002-2003).

2000—2004 Chairman, Organizing Committee, Medinfo2004 (7-11 September 2004, San Francisco), *International Medical Informatics Association*

2000—2010 External Advisory Committee, Biomedical and Health Informatics Program, *University of Washington*, Seattle, WA.

2000—2003 Member, National Committee on Vital and Health Statistics (NCVHS), *Department of Health and Human Services*, Washington, D.C.

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2000—2002 Chair, PIER Steering Committee (Physicians' Information and Education Resource), *American College of Physicians*

2000—2010 Medical Advisory Board, *PatientKeeper, Inc.*, Boston, Massachusetts

2000— Scientific Advisory Board, *Medexpert, Inc.*, Palo Alto, California

2000—2004 Scientific Advisory Board, *Clinician Support Technology, Inc.*, Framingham, Massachusetts

1998—2001 International Advisor, Medical Informatics Programme, *National University of Singapore*.

1998—1999 Committee on Enhancing the Internet for Medical Applications (Chair), Computer Science and Telecommunications Board, *National Research Council*, National Academies of Sciences, Engineering, and Medicine, Washington, DC

1997—1999 Section Liaison, Section 01 (Physical, Mathematical, Computer, Information, and Engineering Sciences), *Institute of Medicine (now National Academy of Medicine)*, National Academies of Sciences, Engineering, and Medicine, Washington, DC

1997—2002 President's Information Technology Advisory Committee (PITAC), *Executive Office of the President*, Washington, D.C.

1997—1998 Advisory Committee on Internet-2, *Internet 2 Academic Consortium*

1997—2005 Scientific Advisory Board, *Surromed, Inc.*, Palo Alto, California

1997—2006 Board of Directors, *Friends of the National Library of Medicine*

1996—1997 Planning Panel on International Programs, *National Library of Medicine*

1996—1998 Consulting Committee to the Chemical/Biological Incident Response Force, US Marine Corps (Quantico and Camp Lejeune), *United States Department of Defense*

1996—1999 University Advisory Board, *Stanford University*

1996—2000 Board of Directors, *Mcard, Inc.*, Sunnyvale, CA.

1996—2002 Board of Regents, *American College of Physicians*
Research Center Advisory Committee (1997— 1999)
Publications Committee (Chair, 1997— 2000)
PIER Steering Committee (Chair, 2000—2002)

1996—2001 Chair, Scientific Advisory Board, *Caresoft, Inc.*, Sunnyvale, CA.

1995—2003 Public Policy Committee, *American Medical Informatics Association* [Committee Chair: 1995-96]

1995—1997 Final Judges' Committee for Health Care, *The Global Information Infrastructure Awards* [formerly NII Awards], Santa Monica, CA.

1994—2002 Publications Committee, *American College of Physicians* (Chair, 1997—2000)

1993—1998 Board of Directors, *Smart Valley, Inc.*, Palo Alto, CA.

1993—1994 Board of Directors, *American Medical Informatics Association*

1992—1996 Membership Committee, *Institute of Medicine (now National Academy of Medicine)*; [Section 1 Chair, 1994-96.]

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- 1993 Co-chairman (with C. Everett Koop, M.D.), Workshop on the National Information Infrastructure and Health Care, *National Research Council*, Washington, D.C.
- 1992—1993 Committee on Regional Health Data Networks, *Institute of Medicine*
- 1992—1996 Advisory Board, Health Sciences Computer Education Project, *Friends of the National Library of Medicine*
- 1992—1994 Scientific Advisor, *Teknekron Corporation*, Menlo Park, CA.
- 1991—1995 Scientific Advisory Board, *AIDS Community Research Consortium*, Redwood City, CA.
- 1991—1996 Computer Science and Telecommunications Board, *National Research Council*.
- 1991—1992 Federal Networking Advisory Council, *National Science Foundation* [Member of Steering Committee].
- 1990—1996 *American College of Medical Informatics*: President-Elect (1990-92), President (1992-94), Past-President (1994-96).
- 1990—1994 Appointments and Promotions Committee, Stanford University School of Medicine; Associate Chair, 1991-92; Chair, 1992-94.
- 1990—1993 Committee on Libraries (C-LIB), Stanford University.
- 1989—1991 Committee to Improve the Patient Record, *Institute of Medicine*. [Chair, Subcommittee on Strategies for Implementation]
- 1988—1991 *Society for Medical Decision Making*: President-Elect (1988-89), President (1989-90), Past-President (1990-91).
- 1988—1992 TyPE Advisory Council, *InterStudy/Quality Quest*, Excelsior, Minnesota.
- 1988—1991 Board of Directors, *American Medical Informatics Association*.
- 1987—1993 Computer-Based Testing Advisory Panel, *National Board of Medical Examiners*.
- 1986—1991 Editorial Board, *BRS Colleague*, New York.
- 1986—1987 Consultant to the Search Committee in Medical Information Sciences, University of Pennsylvania School of Medicine, Philadelphia.
- 1985—1986 Chairman, Advisory Planning Panel on Medical Informatics, *National Library of Medicine*, Bethesda, Maryland.
- 1984—1986 Executive Board, *American College of Medical Informatics*.
- 1984—1990 Board of Directors, *Symposium on Computer Applications in Medical Care* (SCAMC, Inc.). President, 1988-1990.
- 1984—1986 Scientific Advisory Board, *Centre Mondial Informatique*, Paris.
- 1984—1987 Board of Councilors, *American Association for Artificial Intelligence*.
- 1984—1985 Steering Committee on Medical Information Sciences, *Association of American Medical Colleges*.
- 1983—1989 Technology Advisory Board, *Teknowledge, Inc.*, Palo Alto, California.
- 1983—1986 Committee on Academic Computing and Information Systems (C-ACIS), Stanford University.

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- 1983—1988 Medical Informatics Subcommittee (formerly Telecommunications Subcommittee), *American College of Physicians*.
- 1982—1990 Board of Directors, *American Association for Medical Systems and Informatics* [Three terms: 1982-84, 1984-86, 1989-90].
- 1981—1983 Founder of Medical Subgroup (AAAI-M) and Medical Liaison, *American Association for Artificial Intelligence* (now *Association for the Advancement of Artificial Intelligence*)
- 1981—1985 Board of Trustees, *Society for Medical Decision Making* (two terms).
- 1981—1991 Member, Steering Committee, *Association for Advanced Technology in the Biomedical Sciences*.
- 1980—1984 Member, Biomedical Library Review Committee, *National Library of Medicine* (Chairman, July 1983 - June 1984).

Elected Professional Memberships

- 2003 Fellow, *New York Academy of Medicine*
- 2002 Master, *American College of Physicians (MACP)*
- 1993 Fellow, *American Association for the Advancement of Science (AAAS)*
- 1993 Member, *Association of American Physicians (AAP)*
- 1992 Member, *American Clinical and Climatological Association (ACCA)*
- 1991 Fellow, *American Institute for Medical and Biological Engineering (AIMBE)*
- 1991 Member, *Western Association of Physicians (WAP)*
- 1990 Fellow, *Association for the Advancement of Artificial Intelligence (AAAI)*
- 1987 Member, *Institute of Medicine (now National Academy of Medicine), National Academies of Sciences, Engineering, and Medicine (IOM)*
- 1986 Member, *American Society for Clinical Investigation (ASCI)*
- 1984 Fellow, *American College of Medical Informatics (FACMI)*
- 1984 Member, *National Academies of Practice (NAP)*
- 1984 Fellow, *American College of Physicians (FACP)*
- 1983 Member, *Western Society for Clinical Investigation (WSCI)*

Other Professional Memberships

- 2008— *American Medical Association*
- 1995—1997 *American Educational Research Association*
- 1992—2001 *Computer-Based Patient Record Institute (CPRI)*
- 1991—2007 *The Internet Society*
- 1988— *American Medical Informatics Association (AMIA)*

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1985—2010 *IEEE Computer Society*
1983—2000 *Society for General Internal Medicine (SGIM)* (Formerly SREPCIM)
1983—1993 *American Federation for Clinical Research (AFCR)*
1980—2012 *Society for Medical Decision Making (SMDM)*
1980— *American Association for Artificial Intelligence (AAAI)*
1978— *American College of Physicians (ACP)* (Fellowship in 1984, Mastership in 2002)
1978—1990 *American Association for Medical Systems and Informatics} (AAMSI)* (formerly Society for Computer Medicine)
1972— *Association for Computing Machinery (ACM)*

Doctoral Student Supervision

Paul Cohen Computer Science and Psychology (Stanford) - 1983 (committee)
'Heuristic Reasoning Under Uncertainty: An Artificial Intelligence Approach.'

Gregory F. Cooper Medical Information Sciences (Stanford) - 1984 (advisor)
'NESTOR: A Computer-Based Medical Diagnostic Aid that Integrates Causal and Probabilistic Knowledge.'

John C. Kunz Medical Information Sciences (Stanford) - 1984 (committee)
'Use of Artificial Intelligence and Simple Mathematics to Analyze a Physiologic Model.'

David E. Smith Computer Science (Stanford) - 1985 (committee)
'Controlling Inference.'

Glenn D. Rennels Medical Information Sciences (Stanford) - 1986 (advisor)
'A Computational Model of Reasoning From the Clinical Literature.'

Mark A. Musen Medical Information Sciences (Stanford) - 1987 (advisor)
'Generation of Model-Based Knowledge-Acquisition Tools for Clinical Trial Advice Systems.'

Curtis P. Langlotz Medical Information Sciences (Stanford) - 1989 (advisor)
'A Decision Theoretic Approach To Heuristic Planning.'

David Klein Computer and Information Sciences (University of Pennsylvania) - 1989 (advisor)
'Interpretive Value Analysis.'

Thierry Barsalou Medical Information Sciences (Stanford) - 1990 (committee)
'Toward Expert Database Systems: Integration of Object-Oriented Methods with a Relational Architecture.'

David Heckerman Medical Information Sciences (Stanford) - 1990 (committee)
'Probabilistic Similarity Networks.'
[ACM Doctoral Dissertation Award, 1990]

Holly Jimison Medical Information Sciences (Stanford) - 1990 (advisor)
'A Representation for Gaining Insight into Clinical Decision Models.'

Eric Horvitz Medical Information Sciences (Stanford) - 1990 (committee)
'Computation and Action Under Bounded Resources.'

R. Martin Chavez Medical Information Sciences (Stanford) - 1990 (advisor)

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'Architectures and Approximation Algorithms for Probabilistic Expert Systems.'

Brad R. Farr Medical Information Sciences (Stanford) - 1991 (committee)
'Assessment of Preferences Through Simulated Decision Scenarios.'

Harold Lehmann Medical Information Sciences (Stanford) - 1991 (advisor)
'A Bayesian Computer-Based Approach to the Physician's Use of the Clinical Research Literature.'

Henri Jaap Suermondt Medical Information Sciences (Stanford) - 1992 (committee)
'Explanation in Bayesian Belief Networks.'

John Egar Medical Information Sciences (Stanford) - 1994 (committee)
'Construction of Normative Decision Models Using Abstract Graph Grammars'

Geoffrey Rutledge Medical Information Sciences (Stanford) - 1995 (committee)
'Dynamic Selection of Models.'

Lucila Ohno-Machado Medical Information Sciences (Stanford) - 1996 (committee)
'Hierarchical Neural Networks: Applications in Survival Analysis'

Gretchen Purcell Medical Information Sciences (Stanford) - 1996 (advisor)
'Contextual Document Models for Searching the Clinical Literature'

Alex Poon Medical Information Sciences (Stanford) - 1996 (committee)
'Optimizing the Task of Menu Selection for Large Controlled Vocabularies'

Keith E. Campbell Medical Information Sciences (Stanford) - 1997 (advisor)
'Distributed Development of a Logic-Based Controlled Medical Terminology'

Gillian D. Sanders Medical Information Sciences (Stanford) - 1998 (committee)
'Automated Creation of Clinical-Practice Guidelines from Decision Models'

Cecil Huang Medical Information Sciences (Stanford) - 1999 (committee)
'Intelligent Alarms for Monitoring'

Wanda M. Pratt Medical Information Sciences (Stanford) - 1999 (committee)
'Dynamic Knowledge-Based Hierarchical Text Categorization'

Diane Oliver Biomedical Informatics (Stanford) – 2000 (committee)
'Managing Local Divergence of a Shared Clinical Vocabulary''

Daniel C. Berrios Biomedical Informatics (Stanford) – 2001 (committee)
'Methods for Semi-Automated Index Generation for High Precision Information Retrieval'

Dongwen Wang Medical Informatics (Columbia) – 2003 (advisor)
'A Generic Execution Model for Sharing of Computer-Interpretable Clinical Practice Guidelines'

Trevor Cohen Biomedical Informatics (Columbia) – 2007 (committee)
'Augmenting Expertise: Computer-enhanced Clinical Comprehension in Psychiatry'

Knarig Arabshian Computer Science (Columbia) – 2008 (committee)
'Ontology-based Context-aware Service Discovery in a Globally Distributed Network'

Akshay Vankipuram Biomedical Informatics (Arizona State University) – current (committee)

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Editorial Boards

- 2001— *Journal of Biomedical Informatics*, Elsevier Science, *Editor in Chief*
- 2002— *Informatica Journal*, Fundacion de Informatica Medica, Miami, Florida
- 1998— *Information Systems Frontiers*, Springer
- 1998— *American Journal of Medicine*, Elsevier Science
- 1997—2001 *International Journal of Medical Informatics*, Elsevier
- 1993—1995 *Journal of the American Medical Informatics Association*, Hanley and Belfus
- 1991—1994 *Annals of Internal Medicine*, American College of Physicians
- 1991—1992 *Internet News: The Newsletter of the Internet Society* (Contributing Editor for biomedical community)
- 1989—2017 *Artificial Intelligence in Medicine*, Elsevier Science
- 1986—2000 *Computers and Biomedical Research*, Academic Press
- 1986—2003 *Methods of Information in Medicine*, Schattauer
- 1986—1988 *Medical Decision Making*, Hanley and Belfus, Inc.
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- 1999—2000 *Annual Reviews, Inc.*, Palo Alto, California.
- 1990—1991 *Outcomes Measurement and Management*, The Zitter Group, San Francisco
- 1985—1992 *M.D. Computing*, Springer Verlag
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