

CURRICULUM VITAE

William LeRoy Heinrichs, B.S., M.D., M.S., Ph.D., FACOG

Personal Data:

Birth Date	August 14, 1932	
Birth Place	Collinsville, Oklahoma	
Citizenship	U.S.A.	
Social Security No.	XXX-XX-XX91	
Marital Status	Married to Phyllis M. Smith	1954
Children	• Son, Stephen C. • Daughter, Lynn K.	1961 1965

Education:

Grade School	• Eureka School	1938-46
High School	• Central High School, Collinsville, OK	1946-50
College: B.S.	• Southwestern State College Weatherford, OK	1951-54
Medical School: M.D. (Honors)	• University of Oklahoma School of Medicine, Oklahoma City, OK	1954-58
Rotating Intern	• St. Anthony Hospital, (affiliate of University of Oklahoma Medical School), Oklahoma City, OK	1958-59
Ob/Gyn Residency	• Harper Hospital, (affiliate of Wayne State University Medical School), Detroit, MI	1959-62
PHS Post-Residency Fellowship	• Dept. of Obstetrics & Gynecology and Biochemistry	1962-67
M.Sci., Ph.D. Degrees	University of Oregon School of Medicine Portland, OR	

Academic Honors:

Grade & High School College	• Valedictorian of the graduating class • Elected Alpha Phi Sigma and Tri Beta (National Academic Fraternities)	1946, '50 1953
Medical School	• Student Research Achievement Honor Award in Biochemistry	1958
Ob-Gyn Residency	• Second Award for a Scientific Paper; Harper Hospital Residency Program	1962
Post-Residency Training	• Appointed Josiah Macy, Jr. Faculty Fellow in Obstetrics and Gynecology	1966
Career	• President's (Purdue-Frederick Award) First Award for Research, American College of Obstetrics and Gynecology • Chairman, Reproductive Dysfunction Study Group SGOMSEC – Scientific Group on Methodologies for the Safety Evaluation of Chemicals; sponsored by the Scientific Committee on Problems of the Environment (SCOPE), and the World Health Organization (WHO) • Invited Presentation, NIH Consensus Development Conference on Magnetic Resonance Imaging: "Reproduction Toxicity of Magnetic Resonance: Studies of Gamete-, & Embryo- toxicity, and of Teratogenesis.", Bethesda, Maryland. • Invited Participant, NSF Planning	1970 1978 1980 1993

	Conference on Computer-Assisted Surgery, Washington, D.C.	
	• Program Committee Member and	1994, '95
	• Session Co-chair, Symposium on Medical Robotics & Computer-Assisted Surgery, Pittsburgh, PA	1994
	• Keynote Speaker: International Society of Gynecological Endoscopy, London, U.K	1995
	• Session Chair, 1st Joint Conference on CVRMed and MRCAS, Grenoble, FR	1997
	• Semi-final Judge, GII Awards (Global Information Infrastructure Awards)	1998
	• Finalist Judge, GII Awards	1999
	• Session Chair, Women's Healthcare; MMVR, San Francisco, CA, and at MMVR @Stanford, Stanford, CA	1999
	• Keynote Speaker: IEEE / Computer-based Medical Systems, Stamford, CT	1999
	• Keynote Speaker: MMVR2000: Envisioning Healing, & Organizer, Stereoscopic Images Newport Beach, CA	2000
	• Recipient, 8 th Annual Satava Award, Medicine Meets Virtual Reality, Newport Beach, CA January	2002
	• Recipient, American Men & Women of Science.	2004-
	• Keynote Speaker; 'Robot, I Noti Ignoti', Centre of the Future, Tekecom Italia, San March, Venice	2005
	• Keynote Speaker: The OR of the Future', San Francisco, CA	Jan 19, 2006
		Los Angeles, CA May 19, 2006
	• Invited Speaker, 1 st Serious Virtual Worlds Conf. Coventry, UK	9/2007 & '08
	• Invited Inaugural Address, the iVAS (international Virtual Association of Surgeons, Second Life, NHS	7/2008
	• Invited Lecture, National Defense University, NLM/NIH Panel on Emergency Preparedness, Wash. DC	3/2008
Academic Appointments:		
Clinical Instructor	• Dept. of Obstetrics & Gynecology, University of Oregon Medical School, Portland, OR	1965-66
Assistant Professor	• Dept. of Obstetrics and	1967-69
Associate Professor	Gynecology, University of	1969-72
Professor	Washington School of Medicine	1972-76
	Seattle, WA	
Visiting Fellow (Sabbatical)	• Battelle Memorial Institute	1973
Professor & Chairman	• Department of Gynecology and Obstetrics	1976-84
Professor	Stanford University School of	1976-94
Professor & Past Chair (Emeritus, Active)	Medicine, Stanford, CA	1994-07
Professor & Past Chair		2008-

(Emeritus)		
Visiting Professor (Sabbatical)	• University of California, San Francisco, CA	1984-85
Executive Positions:		
President & Chm.,	• Surginetics Corporation	1993-94
Med. Advisory Board	Redwood City, CA	1992-94
Chief Medical Officer	• Innovation in Learning, Inc.	2008–
Professional Organizations (current):		
Fellow	• American College of Obstet and Gynecol	1967-
Certified Diplomate	• American Board of Obstet and Gynecol (Re-certified voluntarily)	1967- 1983-
Member (invited)	• The Endocrine Society	1967-
Member (invited)	• Society for Gynecologic Investigation	1969-
Member (invited)	• Western Society for Clinical Research	1971-93
Member	• Pacific Coast Fertility Society	1977-95
	• Shufelt Society	1978-93
	• Peninsula Gynecological Society	1978-93
Member (invited)	• San Francisco Gynecological Society	1978-93
Associate Examiner (invited)	• American Board of Obstetricians and Gynecologists	1978-84
Member (invited)	• American Gynecological Society	1981-
Member (invited)	• American Association of Obstetricians and Gynecologists (now, AGOS)	1981-
Member	• American Society for Reproductive Medicine	1986-
	• American Association of Gynecologic Laparoscopists	1990-
	• International Society of Gynecologic Endoscopy	1997-
	• Soc. Laparoendoscopic Surgery	2003-
	• Associates of Council of Gynecologic Endoscopy	2006-
Organization Responsibilities:		
Program Committee	• Society for Gynecologic Investigation	1975-80
Member		
Council Member	• Society for Gynecologic Investigation	1979-81
Program Committee	• Liaison (FIGO), Xth World Congress	1979-82
Member:	• MRCAS	1997-99
	• MICCAI	1997-01
	• Medicine Meets Virtual Reality (MMVR)	1999-
	• IEEE Computer Based Medical Systems	2001-
Organizer, Chair	• MMVR Stereoscopy Projection Session	2000-02
Advisory Committee	• MMVR	2002-
Co-chair,	• MMVR Surgical Simulation Workshop	2003
Member	• AAGL CME Committee	2002-
Member	• Soc. Laparoendoscopic Surgery Simulation Com.	2005-
Member	• Council Gynecologic Endoscopy (AAGL)	2007-9
Secretary	• Council Gynecologic Endoscopy (AAGL)	2010
Vice-President	• Council Gynecologic Endoscopy (AAGL)	2011
President	• Council Gynecologic Endoscopy (AAGL)	2012
School of Medicine Committees:		
Member:	• Advisory Committee, Clinical Research Center	1977-79

	for Premature Infants	
	• Medical Student Teaching Program (Admission)	1976-80
	• Radioisotope Committee	1978-80
	• Medical School Finance Committee	1979-80
	• Executive Committee	1976-84
	• Admissions Panel	1984-85
	• Faculty Senate	1984-85
	• Center for Immersive and Simulation-based Learning (CISL)	2003-10
Hospital Committees:		
Member:	• Clinical Care Committee	1976-84
	• Perinatal Care Committee	1976-84
Chairman	• Patient Admission Committee	1979-80
Member:	• Operating Room Committee	1990-94
	• Endoscopy Committee	1991-94
	• Quality Assurance Committee (Dept. Gyn/Ob)	1991-02
Guest Surgeon:	• Stanford Center for Endoscopic Training and Technology	1992-93
	• Alvarado Hospital Endoscopy Course	1992-98
Department Activities (post-Chair):		
Head	• Section of Gynecology	1985-93
Medical Director	• Outpatient Clinic	1988-93
Other Academic Appointments:		
Associate Editor	• Gynecologic Investigation: an International	1970-76
Acting Editor	• Journal of the Science of Reproduction	1976-78
Member,	• PHS (NIH) Study Section;	1974-78
Chairman	(Human Embryology and Development-HED)	1979-81
Member, Editorial Board	• Western Journal of Medicine	1979-85
Referee for journals:	• Science, • Am. Journal Ob-Gyn,	1978-93
	• Obstetrics/Gynecology, • Chest	1980-97
	• Am. J. Gynecol. Laparoscopists	1994-
	• Soc. Gynecol. Invest.	1970-99
	• SIIH	2011-
Director, Surgical Simulation	• SUMMIT http://summit.stanford.edu	1993-07
Associate Director	• SUMMIT	2003-07
Affiliate,	• Biomedical Informatics, Dept. of Medicine	2000-
Member, Exec. Com'te	• Center for Immersive and Simulation-based Learning (CISL), School of Medicine	2005-10
Hospital Appointments:		
Attending Staff (Retired)	Stanford University, Stanford, CA	1976-94
Attending Staff (Resigned)	Santa Clara Valley Medical Center	1994
Consultant (Program deleted)	San Jose, CA	1976-84
	Oak Knoll Naval Hospital	1978-79
	Oakland, CA	
Medical Licensure:	Oklahoma (inactive)	1958-95
	Washington (inactive)	1967-95
	Oregon (inactive)	1962-92
	California (retired)	1976-04

Corporate Positions:

Co-founder	Surginetics, Inc.	1992-04
Advisory Board	Panaseca, Inc., Palo Alto, CA	1998-10
Director, Women's Health	PersonalMD, Inc. Pleasanton, CA	1999-04
Medical Advisor	Biocontrol Systems	2001-
Advisory Board	AMAINC, Medicine Meets Virtual Reality	2002-
Consultant	Immersion Medical, Inc.	2002-05
Chair, Medical Advisory	Volugraphics	2004-06
Consultant-Medical	Forterra Systems, Inc.	2004-09
Co-founder, Chief Medical Officer	Innovation in Learning, Inc. http://www.Innovationinlearning.com	2008-
Medical Advisor	FirstPoint Health, Inc.	2010-
Board Member	Surgical Education Foundation (NPO)	2012-

IIL Address: 12600 Roble Ladera, Los Alto Hills, CA 94022, Email: wlh@stanford.edu
leroy.heinrichs@innovationinlearning.com

Secondary Address:

Stanford Hills Consulting, 8 Campbell Lane, Menlo Park, CA 94025
 Phone / Answer / Fax (650) 854-7410, cell -on request leroy.heinrichs@gmail.com

Corporate Product Awards: *CliniSpace™* & *DynaPatients™*: *BattleCare™*

- Finalist, I/ITSEC 2010 Serious Games Challenge, December 2010
- First Place, Artificial Intelligence in Training, and Grand Winner in All AI Categories, FVWC GameTech 2011, March 2011
- Finalist, UNITE 2011 Developers Conference, Sept. 29, 2011
- First Place, Concept Design, and Grand Winner in All Categories, FVWC GameTech 2012, March 2012

Current Consulting Activities: Simulation-based Learning – surgical simulation, critical care team learning, changes in clinical practice through education in healthcare, Serious Virtual Worlds for CPR training, Emergency Preparedness training, & RN training

Patents: 1) Continuous OC Therapy for Mg'mt of Endometriosis Pain (abandoned)
 2) Smart Bandage (local temperature, wireless sensing system)
 3) Tampon guide (first-time users)

Current Activities: Developing Virtual 3D Worlds Simulations for team training: Basic Medical Emergencies, incl. CPR (High School), and Virtual ED for mass casualties (MDs & RNs). Primary focus on Patho-physiological Models (Hemorrhagic, Asphyxial, & Septic Shock) for Virtual Patients. Presentations about *CliniSpace™* and *DynaPatients™*.

Licensable Intellectual Property:

- 1) Lucy 2.0– stereoscopic pelvic models – WLH
- 2) Patho-physiological Models for Virtual Patients – IIL, Inc.
 - a. Asphyxial shock
 - b. Traumatic Hemorrhagic, Hypovolemic shock
 - c. Infection /Septic shock

Grants and Contracts: (Past decade)

National Wallenberg Global Learning Network (WGLN I) Planning Grant 2002, \$90,000

SimTech: Simulation Technologies for Team Learning in Critical Care Management - Feasibility Study; Heinrichs (PI)

Description: Design and development of two simulation-based learning environments: a 3D Virtual World simulation and the human patient simulator for training ED teams to manage 10 trauma patient cases.

Role: PI

Institutes of Health: NLM Contract N01-LM-3-3512; Dev (PI)

09/30/03 – 09/29/07; \$1.8 million annually

Advanced Network Infrastructure for Distributed Learning and Collaborative Research.

Description: Develop national testbeds to evaluate impact of a scalable, networked information infrastructure

Role: Co-PI

**Wallenberg Global Learning Network (WGLN I) Development Grant 2003-05
10/1/03 to 4/30/05; \$130,000; Heinrichs (PI)**

SimTech: Simulation Technologies for Team Learning in Critical Care Management

Description: Study to determine the educational value of a web-based three-dimensional “Virtual World” simulating an Emergency Dept health care team. Medical students assigned to learn team leadership skills using either the Virtual World or a mannequin-based patient simulator performed equally well when managing 8 trauma patients.

Role: PI

Department of Defense: W81XWH-04-1-0898; Dev (PI)

09/28/04 – 03/19/07

Simulation-Based Learning Workshops for Researchers and Educators in the Western United States

Description: Organize and evaluate eight workshops over two years in simulation and game-based learning

Role: Co-PI

Department of Defense Medical Research (TATRC)/ subcontract from Forterra Systems, Inc.; Dev (PI)

01/03/05 – 07/12/07

Medical Simulation Training for First Response to Chemical, Biological, Radiological, Nuclear and Explosive Incidents

Description: Curriculum design, development and evaluation for CBRNE training

Role: Co-PI

**Wallenberg Global Learning Network (WGLN II) Development Grant 2005-08
9/1/05 to 3/31/07; \$104,917 and**

9/1/06 to 1/15/08; \$104,127; Heinrichs (PI)

SiMErgency: Web-Based Simulation of Medical Emergencies for Teaching HS Students

Description: Design, development and evaluation of online, virtual world scenarios to teach high school students to respond to medical emergencies that require CPR.

Validation studies focused on retention of CPR protocol, improved individual and team performance, increased confidence / self-efficacy and motivation.

Role: PI