Curriculum Vitae
Brett Michael Harnett, MS-IS
Cincinnati, OH
513-558-2725
brett.harnett@uc.edu

Current Position
University of Cincinnati; Cincinnati, OH
Director, Center for Health Informatics
Assistant Professor – Field Service, Biomedical Informatics
Secondary Appointment, Cincinnati Children's Hospital and Medical Center
Adjunct Instructor, Carl H. Lindner College of Business
March 2004 – Current

Employment History
NASA Medical Informatics and Technology Applications Consortium; Richmond, VA
Hosted at Virginia Commonwealth University/Medical College of Virginia
Director, Experimental Information Technology/Faculty Research Assistant
July 1999 - March 2004

OrbitalMed LLC; Richmond, VA
Chief Technology Officer (Adjunct Position)
January 2001 - March 2004

Yale University School of Medicine; New Haven, CT
Telemedicine Systems Manager/systems programmer II
January 1997 - June 1999

Harnett Consulting; East Hartford, CT
Marketing technology consultant/developer
January 1996 - December 1996

Jonathan Wisconsin; Marlborough, CT
Director of multimedia services/system administrator
April 1992 - December 1995

Infield Publishing; Ellington, CT
Consultant/owner
May 1989 - April 1992

Education
University of Cincinnati College of Business; Cincinnati, OH
    Master of Science; Information Systems
    September 2004 - June 2007
Eastern Connecticut State University; Willimantic, CT
    Bachelor of Science; Business Administration
    September 1982 - May 1984
Manchester Community Technical College; Manchester, CT
    September 1980 - May 1982
Nathaniel Hawthorne College; Antrim, NH
    September 1978 - May 1980
Dale Carnegie graduate
    September 1985 - January 1986

External Peer Review Member
National Institutes of Health (NIH), Scientific Review Board: Risk, Prevention & Health Behavior, Washington DC
Telemedicine and e-Health (Editorial Board Member)
New England Journal of Medicine
Medical and Biological Engineering and Computing
IEEE Transactions on Information Technology in Biomedicine
Journal of Health Care for the Poor and Underserved
Health Research Board - Research Funding and Policy Division, Dublin, Ireland

Published Peer Reviewed Manuscripts
Patient-oriented cohort system to educate and encourage clinical communications. **Harnett BM**, Eckman MH, Schauer, DP, Baker P, Ireton R. SUBMITTED

Eckman MH, Lip GY, Wise RE, Speer B, Sullivan M, Walker N, Kissela B, Flaherty ML, Kleindorfer D, Baker P, Ireton R, Hoskins D, **Harnett BM**, Aguilar C, Leonard AC, Arduser L, Steen D, Costea A, Kues J. Impact of an Atrial Fibrillation Decision Support Tool on thromboprophylaxis for atrial fibrillation. Am Heart J. 2016 Jun;176:17-27

Eckman, M. H., Lip, G. Y. H., Wise, R. E., Speer, B., Sullivan, M., Walker, N., Kissela, B., Flaherty, M. L., Kleindorfer, D., Baker, P., Ireton, R., Hoskins, D., **Harnett, B. M.**, Aguilar, C., Leonard, A., Arduser, L., Steen, D., Costea, A., & Kues, J. (2016). Using an Atrial Fibrillation Decision Support Tool for Thromboprophylaxis in Atrial Fibrillation: Effect of Sex and Age. Journal of the American Geriatrics Society, 64 (5), 1054-60. doi:10.1111/jgs.14099

Eckman MH, Wise RE, Speer B, Sullivan M, Walker N, Lip GYH, Kissela B, Flaherty ML, Kleindorfer D, Khan F, Kues J, Baker P, Ireton R, Hoskins PD, **Harnett BM**, Aguilar C, Leonard A, Prakash R, Arduser L and Costea A; Integrating Real-Time Clinical Information to Provide Estimates of Net Clinical Benefit of Antithrombotic Therapy for Patients with Atrial Fibrillation. *Circ Cardiovasc Qual Outcomes.* 2014; 7:680-686

Harnett B, Doarn C, Rosen J, Hannaford B, Broderick, T. Evaluation of Unmanned Airborne Vehicles and Mobile Robotic Telesurgery in an Extreme Environment. *Telemed J e Health* 2008; 14:539-544

Sterbis JR, Hanly RJ, Herman BC, Marohn MR, Broderick TJ, Shih SP, **Harnett B**, Doarn CR, Schenkman NS. Transcontinental Telesurgical Nephrectomy Using the da Vinci Robot in a Porcine Model. Urology; 2008; 71(2)

Harnett, BM. Telemedicine Systems and Telecommunications. *J of Telemedicine and Telecare.* 2006; 12(1):4-15

Harnett BM, Broderick T, Doarn CR, Rafiq A, Muth T, Merrell RC. Dynamic automated data collection for human performance. *J Information Technology in Healthcare.* 2004; 2(3):175-186

Harnett BM, Doarn CR, Zhao X and Merrell RC. Redundant Wireless Communication Technologies for Real-Time Surveillance: Elsevier's *Telematics and Informatics* 2004; 21(4):375-386

Zhao X, Fei DY, Doarn CR, **Harnett BM**, Merrell RC. Project Report: A telemedicine system for wireless home healthcare based on Bluetooth and the Internet. *Telemed J e Health* 2004; 10 (Supp 2):110-116

Fedyukin IV, Reviakin YG, Orlov OI, Doarn CR, **Harnett BM**, Merrell RC. Experience in the Application of Java Technologies in Telemedicine. *Journal of Applied Health Technology eHealth International* 2002; 1(1):3

Doarn CR, Fitzgerald S, Rodas E, **Harnett B**, Prabe-Egge A, Merrell RC. Telemedicine to Integrate Intermittent Surgical Services in to Primary Care. *Telemed J and e-Health* 2002*;* 8(1):131-137

Harnett BM, Doarn CR, Russell KM, Kapoor V, Merriam NR, Merrell RC. Wireless Telemetry and Internet Technologies for Medical Management: A Martian Analogy. *Aviat Space and Environ Med.* 2001; 72(12):1125-1131

Harnett B, Angood P, Merriam N, Satava R, Doarn CR, Merrell RC. The Benefits of Integrating Internet Technology with Standard Communications for Telemedicine in Extreme Environments. *Aviat Space and Environ Med.* 2001; 72(12):1132-1137

Broderick TJ, **Harnett BM**, Doarn CR, Rodas EB, Merrell RC. Real Time Internet Connections: Implications for Surgical Decision Making in Laparoscopy. *Annals of Surg.* 2001; 243 (2):165-171

Broderick TJ, **Harnett BM**, Merriam NR, Kapoor V, Doarn CR, Merrell RC. Impact of Varying Transmission Bandwidth on Image Quality in Laparoscopic Telemedicine. *Telemed J and e-Health* 2001; 7(1):47-53

Satava RM, Angood PB, **Harnett BM**, and Merrell RC. The Physiologic Cipher at Altitude: Telemedicine and real-time monitoring of climbers on Mount Everest. *Telemed J.* 2000; 6(3):303-313

Rosser JC, Bell RL, **Harnett BM**, Rodas E, Murayama M, Merrell RC. Use of Mobile Low-Bandwidth Telemedical Techniques for Extreme Telemedicine Application. *American College of Surgeons J.* 1999; 189(4): 397-404

Textbooks
Harnett B. Contributing Author: From Phenotypes to Terabytes. *Informatics for the Curious: Why Study Health Informatics.* ISBN 978-1-925128-71-0. Edited by Jeffrey Soar and Kishor Vaidya; University of Southern Queensland, Australia. Online http://amzn.to/1IzQBGp

Harnett B. Contributing Author: Patient Centered Medicine and Technology Adaptation. *E-Health, Assistive Technologies and Applications for Assisted Living: Challenges and Solutions.* ISBN13: 9781609604691, ISBN10: 1609604695, Rocker, C. (Ed) IGI Global. 2011. Hershey, PA. Pgs 1-22

Harnett B. Contributing Author: Creating Telehealth Networks from Existing Infrastructures. *Establishing Telemedicine. Developing Countries: From Inception to Implementation.* R Latifi (Ed) IOS Press 2008. Amsterdam. Pgs 55-65

Harnett B. Contributing Author: *Telemedicine Systems and Telecommunications.* ISBN: 1-85315-677-9, Wootton, R. (Ed) Publisher: Royal Society of Medicine Press 2007, London, England. Chapter 2, Pgs 15-34

Harnett B, Doarn CR, Merrell RC. Contributing Author: Telemedicine. *Encyclopedia of Biomaterials and Biomedical Engineering.* ISBN: 0-8247-4789-4 Marcel Dekker, Inc. 2005 New York, NY. Pgs 1449-1457

Harnett B. Contributing Author: Creating Telehealth Networks from Existing Infrastructures. *Establishing Telemedicine. Developing Countries: From Inception to Implementation.* R Latifi (Ed) IOS Press 2004. Amsterdam. Pgs 51-59

Abstracts/Posters
Harnett BM, Eckman, M. The Center for Health Informatics; UC Research Week Symposium. Cincinnati, OH. 2012

Doarn CR, **Harnett BM**, Broderick TJ. Telesurgery: What are the Possibilities? 12th Annual Meeting and Exposition of the American Telemedicine Association, Nashville, TN. 2007. Telemed and E Health 2007; 12(2):190

Huffman L, Doarn CR, **Harnett B**, Moses G, Broderick TJ. Recent Advances in Robotic Telesurgery and Applications to Battlefield Trauma. 2nd Annual Meeting of the Association of Academic Surgeons. Phoenix, AZ. 2007

Harnett BM, Broderick TJ, Doarn CR, Huffman L, Rosen J, Hannaford B. Small Unmanned Aerial Vehicle as a Network Access Point for Tele-Robotic Surgical Intervention in the Battlefield. Medicine Meets Virtual Reality 14. Long Beach, CA. 2007

Lum MJH, Rosen J, King H, Friedman DCW, Donlin G, Sankaranarayanan G, **Harnett B**, Huffman L, Doarn C, Broderick T, Hannaford B. Telesurgery via unmanned aerial vehicle (UAV) with a field deployable surgical robot. *Medicine Meets Virtual Reality 15. JD Westwood et al, (Eds). IOS Press.* Amsterdam. 2007; 125: 313-315

Hoffman L, Doarn CR, **Harnett B**, Moses G, Broderick TJ. Recent Advances in Robotic Telesurgery and Applications to Battlefield Trauma. 2nd Annual Meeting of the Association of Academic Surgeons. Phoenix, AZ, 2007

Hanly RJ, Miller B, Herman BC, Marohn MR, Talamini MA, Broderick TJ, Doarn CR, **Harnett B**, Hasser CJ, Schenkman NS. Stereoscopic Robotic Surgical Telementoring: Feasibility and Future Applications. 10th Annual Meeting and Exposition of the American Telemedicine Association, Denver, CO. 2005. *Telemed and E Health 2005; 11(2):247*

Harnett BM, Broderick T, Doarn CR, Rafiq A, Muth T, Merrell RC. Dynamic automated data collection for human performance. *J Information Technology in Healthcare.* Poster Presentation, Medicine Meets Virtual Reality 13, Long Beach, CA, 2005

Zhao X, **Harnett B**, Rafiq A, Doarn CR, Merrell RC. An Online EMR System for International Telemedicine Consultation. 9th Annual Meeting & Exposition of the American Telemedicine Association. Tampa, FL. April 2004. Poster Telemed J E Health 2004; 10(Supp 1):S-120. 2004

Cone S, Carruci LR, Jinxing Y, Rafiq A, **Harnett B**, Doarn C, Merrell R. Acquisition and Evaluation of Radiography Images by Digital Camera. 9th Annual Meeting & Exposition of the American Telemedicine Association. Tampa, FL. April 2004. *Telemed J E Health* 2004; 10(Supp 1):S-38.

Rafiq, A. **Harnett B**, Merrell G, Doarn C, Merrell R. Telemedicine Application during a search for Genghis Khan in Mongolia. 9th Annual Meeting & Exposition of the American Telemedicine Association. Tampa, FL. April 2004. Poster *Telemed J E Health* 2004; 10(Supp 1):S-112

Rodas E, Rafiq, A, Doarn CR, **Harnett B**, Merriam N, Merrell RC, Broderick, TJ, Surgical Simulation in Microgravity. *SAGES.* Denver, CO. 2004. Video Abstract

Non-Peer Reviewed and Articles
Harnett. "Should you allow live broadcasts of cases? Some answer definitive 'no' " Same-Day Surgery, AHC Media, Vol. 32, No. 6, June 2008

Harnett. "Telemedicine: To Mt. Everest and Beyond" American Society of Information Scientists, quarterly journal, Spring 2000

Harnett. "Advanced Medical Technology for Extreme Environments" Space Manufacturing 12; Proceedings from the 14th Space Studies Institute/Princeton Conference on Space Manufacturing, October 1999

Harnett. "Communicating from the Rooftop of the World in Real-Time" RT Imaging, July 1999

Harnett. "Technical diagram [Communications from Everest]" MD Computing, July/August 1999

Teaching
PhD. Biomedical Informatics Program - UC College of Medicine Introduction to Medical Informatics (BMIN7053) 2016
Master's Program in Clinical and Translational Research - UC College of Medicine Introduction to Medical Informatics (13FS_BE8062001) 2013
Master's Program: IS 795/782 - UC College of Business "The Healthcare Landscape"; 2011, 2012
Master's in Public Health (Guest); Public Health Informatics and e-Health - "The Clinical Data Warehouse", 2013
Business of Medicine - UC College of Medicine (Guest) "Technology Application in the Operations of Modern Medicine"; 2009, 2010, 2011, 2012, 2013
Contemporary Issues in Medicine - UC College of Medicine (Guest) "Telecommunications in Medicine"; 2008, 2009, 2011
INTERalliance UC educational host and student advisor; 2006, 2007
Telemedicine Course for Uzbekistan Army Physicians in cooperation with Partnerships for Peace/Information Management and NATO; Tashkent, Uzbekistan; 2003
VCU Telemedicine Honors Course, (Guest); 2001, 2002, 2003
Yale Telemedicine Course for international affiliates; 1999, 1998

Mentorship
Faculty Preceptor, College of Allied Health Sciences; Master's Health Informatics 2015
Faculty Advisor, University of Cincinnati M1 students: Healthcare Transformation Interest Group; 2014 - Present
Faculty Advisor, IT@UC Leadership Academy Mentor program; 2014 - Present

Grants
Key Individual: Pfizer Educational Group, Bristol-Myers Squibb/Pfizer Education Consortium, and NIH/NCATS grant 8 UL1 TR000077-05; Using an Atrial Fibrillation Decision Support Tool (AFDST) for Thromboprophylaxis in Atrial Fibrillation 2015-2016

Key Individual: NIH/NCRR "Cincinnati Center for Clinical and Translational Sciences and Training Grant" Institutional CTSA RR026314 James Heubi, PI 2011-Present

Principal Investigator: Creating a patient registry to facilitate data sharing and encourage patient-centered approaches to improving health and lowering costs; 2013
Funding Agency: Robert Woods Johnson Foundation

Co-I: Appropriate Use of Anticoagulant Therapy in Patients with Atrial Fibrillation; 2013-14
Funding Agency: Pfizer

Co-I: Autonomous Critical Care System (ACCS), Office of Naval Research; Pending
Funding Agency - DOD

Principal Investigator: A Mobile Neural Network for Real-time Physiologic Monitoring; 2006
Funding Agency - University of Cincinnati Faculty Research Support Program

Co-I: High Altitude Platforms Mobile Robotic Telesurgery; 2005

Funding Agency - US Army Medical Research and Materiel Command

Speaking Engagements

"Research Outside the Lab: From the Ocean Floor to 34,000 Feet" Biomedical Informatics Seminar Series, Cincinnati Children's Hospital & Medical Center – February 2015

"Healthcare Informatics for the Research Mission at the University of Cincinnati" Cincinnati OVALS Conference – March 2014

"Technology in Healthcare: An Informatics Perspective" Indiana University Graduate Speaker Series; Bloomington, Indiana – November 2012

"Accessing Electronic Health Record Data for Human Subjects Research: Challenges and Solutions" Panel Member; University of Cincinnati – August 2012

"Improving Patient Outcomes and Operational Efficiencies with Business Intelligence" BI Symposium III, Cincinnati, OH – February 2011

"Telesurgery: The Convergence of Telecommunications, Informatics and Robotics." Doarn CR, Harnett BM, Broderick TJ. Healthcare Information and Management Systems Society, Panel Presentation. New Orleans, LA - February 2007

"Small Unmanned Aerial Vehicle as a Network Access Point for Tele-Robotic Surgical Intervention in the Battlefield" Medicine Meets Virtual Reality 15, Long Beach, CA – February 2007

"Healthcare Symposium" Alumni speaker/panelist, Eastern Connecticut State University, Willimantic, CT - December 2006

"Advanced Network Opportunities for Surgical Tele-Robotics" Center for Computational Sciences, University of Kentucky, Lexington, KY - February 2006

"Advanced Network Opportunities for Surgical Tele-Robotics "Imagine the Possibilities Conference - Bradley University; Peoria, IL - October 2005

"Advanced Network Opportunities for Surgical Tele-Robotics" Fall 2005 Internet2 Member Meeting; Philadelphia, PA - September 2005

"Medical Informatics - A Binary Evolution" University of Cincinnati Surgical Grand Rounds; Cincinnati, OH - September 2004

"Redundant Wireless Communication Technologies for Bioterrorism Surveillance" American Telemedicine Association Annual Meeting; Tampa, FL - May 2004

"Zero Gravity Research Onboard NASA's KC-135 Aircraft" Virginia Aviation Museum, Celebrating 100 Years of Flight; Richmond, VA - December 2003

"Distance Medicine" Association of Information Technology Professionals; Regional Conference; Richmond, VA - August 2003

"Telehealth Technologies: Research and Application" Area Health Education Center (AHEC) Board of Directors Meeting; New Haven, CT (via teleconference) - June 2003

"NASA- Sponsored Research at VCU" Highland Springs High School, Engineering Center; Richmond, VA - May 2003

"Operation Lion Heart: Real-time physiologic data via cellular and LEOS" American Telemedicine Association Annual Meeting; Session Chairman; Orlando, FL - April 2003

"Developments in Wireless Telemetry" VCU Emerging Technology Day - April 2003

"Medical Informatics: A Technical Perspective" Advanced Health Informatics Presentation; VCU School of Medicine - March 2003

"Operation Lion Heart - Physiologic Telemetry Using Whatever the Heck is Available" Caribbean Telemedicine Association Meeting; San Juan, Puerto Rico - November 2002

"New Technologies in Telemedicine" Area Health Education Center (AHEC) Annual Meeting; Ledyard, CT (via teleconference) - October 2002

"Telemedicine Research at VCU" Virginia Biotechnology Summit and Governor's Conference on Technology Transfer and University Research; Tyson's Corner, VA - October 2002

"Telemedicine at VCU" Defining the virtual collaborative clinic model: Bringing medical expertise to remote sites in space and on earth - NASA; Albuquerque, NM - August 2002

"A Physiologic Data Routing Hub for Wireless Sensors: The VitalPoll" American Telemedicine Association Annual Meeting; Los Angeles, CA - June 2002

"Portable Telemedicine, Sensors and the VitalPoll" Distributed Medical Intelligence Conference VII; Park City, UT - March 2002

"Mobile Healthcare, Sensors and Medical Education," Roundtable Expert Participant, International Conference on Mobile Health; San Diego, CA - November 2001

"Telemedicine from the Mars Arctic Research Station: An Exercise for Remote Medical Sensing" Keynote Plenary Session/Telemedicine World at TeleCon 2000; Anaheim, CA - December 2000

"Arctic Circle Communications and Tools" Arctic Council on Telemedicine; U.S. State Department, Washington DC - November 1999

"Extreme Telemedicine" American Society of Information Scientists; Washington DC - October 1999

"H.323 and Distance Learning" Internet2 Global MegaConference; Richmond, VA - October 1999

"Mount Everest Telemedicine" Telehealth & Multimedia International Congress; Edmonton, Alberta Canada - August 1999

"Everest Educational Expedition" Olympus America; Melville, NY - May 1999

"Extreme Telemedicine" Space Studies Institute; Princeton University - May 1999

"The Future of Medicine [Satava]" Maryland Technology Showcase; Baltimore, MD - December 1998

"Internet Telemedicine" National Space Agency of Ukraine and the Ukrainian National Medical University; Kiev, Ukraine - September 1997

Awards and Acknowledgements

University of Cincinnati Faculty Development Council Award; European Federation for Medical Informatics Symposium, Pisa, Italy; 2012
Eastern Connecticut State University Alumni Fellows; Careers in Science; 2009
Finalist - Infineon Technology Innovation Award; Greater Richmond Technology Council; 2003
Technical/Network Design - Kosovo Foundation for Medical Development, Kosovo; 2002
Special Recognition - Western Regional Medical Authority, Jamaica; 2001
Special Recognition - Moscow State Medical University, Moscow, Russia; 2000

Committees/Faculty Service
UC Institutional Review Board (IRB) member
UC IT Governance Research & Development Committee (Co-Chair)
Clinical Research Informatics Advisory Group (CRIAG)
CCTST/CTSA Steering Committee
Committee on development of the Institute for Computing and Data Sciences
UC IT Strategic Planning Committee
Task Force: Institute for Comparative Effectiveness and Outcomes Research
Research Data Management, Security & Compliance Committee
UC Health Telemedicine Central Coordinating Committee
Master's of Health Informatics Course Development Committee
Blue Ribbon IT Governance Committee
Bundled Services Oversight Committee
Lab Management Steering Committee
IMTC Core Systems Software Management Task Force
University of Cincinnati Faculty Senate - Senator At-Large - *Elected position (2010-2012)*
UC Senate Standing Committee for Information Technology
UC COM Senate Ad Hoc Committee on Faculty Affairs
UC COM Senate Lab Management Course Steering Committee
UC Collaborative Telehealth Steering Committee (co-chair)
West Chester Medical Center surgical suite vendor selection
University Hospital Surgical Initiative Scheduling and Access Project
UC/UCP Re-engineering IT Task Force
UC AIT&L Position Search Committee
UC COM Software Development Group
UC Information Technology Group / Policy Committee
West Chester Medical Center Planning Committee
UC/Health Alliance Advanced Technology Group
VCU PDA Special Interest Group
VCU Plant Operations/Operating Room Wiring Initiatives
VCU Internet2 Development Group
Yale University Telemedicine Advisory Board
Yale University NASA/CSC Technology Committee
Yale University NASA/Space Biomedical Center Joint Oversight Committee - technical advisor

Organizations
American Medical Informatics Association (AMIA)

NASA Projects
Surgical procedures in microgravity – robotic laparoscopic research/KC-135 aircraft, Houston, TX
Remote physiologic monitoring/Mt. Everest, Nepal
Remote control of surgical robots in undersea NOAA Aquarius module/Key Largo, FL
Space Shuttle flight STS 87: Collaborative Ukrainian Experiment/Ukraine
Anti-terrorist exercise – remote air quality sensing at Super Bowl XXXVII /San Diego, CA
Mars medical emergency simulation/Arctic Circle, Canada
Post Conflict telemedicine center development/Kosovo, Balkans/Europe

Pre/Post-surgical intervention via telemedicine/Ecuador jungles
Operation Helping Hands – surgical relief mission/Dominican Republic

<u>Community Science Service</u>
Judge, Science & Engineering Expo District 11 Science Day 2005 – 2008, 2012 - 2015
Judge, UC Graduate Poster Forum 2005 - 2008
INTERalliance educational host and student advisor; 2006, 2007
NASA Langley FIRST Robotics Competition; pit crew; 2001, 2002, 2003
BioBiz Entrepreneurial mentor for VCU Business School MBA student via funding from the [Ewing Marion Kauffman Foundation](#) - 2002
Judge, Greater Richmond Technology Council, Infineon Technology Innovation Award - 2002
Science panelist for multi-site videoconference, The Jason Project "Frozen Worlds" Richmond Science Museum - 2002
Judge, [FIRST](#) (For Inspiration and Recognition of Science and Technology) Lego League Robotic Competition; Theme: Arctic Impact - 2001

<u>Miscellaneous</u>
High altitude physiologic training; Andrews Air Force Base, Maryland – 2003, 2007
 "Life Signs: Personal Health Protection" health.discovery.com interview January – 2001
FAA Licensed Private Pilot