

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.  
 Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Brett M. Harnett		POSITION TITLE Asst. Professor, Research	
eRA COMMONS USER NAME (credential, e.g., agency login) brettharnett			
EDUCATION/TRAINING ( <i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i> )			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Nathanial Hawthorne College	- transfer	1978-80	Aviation Science
Manchester Community Technical College	- transfer	1980-82	Business
Eastern Connecticut State University	BS	1982-84	Business
University of Cincinnati	MS	2005-07	Information Systems

**A. Positions and Honors**

**Positions and Employment**

- 1987 – 1989 Marketing director/system administrator; Bilodeau Communications; Manchester, CT
- 1989 – 1992 Consultant [owner]; Infield Publishing; Ellington, CT
- 1992 – 1995 Director of multimedia services/system administrator; Jonathan Wisconsin; Marlborough, CT
- 1995 – 1996 Marketing technology consultant/developer [owner]; Harnett Consulting; East Hartford, CT
- 1997 – 1999 Telemedicine Systems Manager/Systems Programmer II; Yale University School of Medicine, NASA Commercial Space Center/ Medical Informatics and Technology Applications; New Haven, CT
- 1999 – 2004 Director, Experimental Information Technology/Research Assistant; Virginia Commonwealth University, Medical Informatics and Technology Applications Consortium; Richmond, VA
- 2004 – Present Research Assistant Professor; University of Cincinnati; Associate Director, Experimental IT, Advanced Center for Telemedicine and Surgical Innovation

**Other Experience and Professional Memberships**

- Editorial Board Member, Telemedicine and e-Health, Mary Ann Liebert, Inc. Publishers National Institutes of Health, Scientific Review Board, Washington DC (external peer review)
- Health Research Board - Research Funding and Policy Division, Dublin, Ireland (external peer review)
- IEEE Transactions on Information Technology in Biomedicine (external peer review)
- Medical & Biological Eng & Computing (external peer review)
- Telemedicine and E-Health (external peer review)
- Journal of Health Care for the Poor and Underserved (external peer review)

*Organizations and Committees:*

- American Telemedicine Association (ATA)
- Institute of Electrical and Electronics Engineers (IEEE)
- American Medical Informatics Association (AMIA)
- UC Collaborative Telehealth Steering Committee (co-chair)
- UC/UCP Re-engineering IT Task Force
- UC COM Software Development Group
- UC IT Partnership Committee
- UC Integrated Advanced Information Management Systems Committee
- UC Information Technology Policy Committee
- UC/Health Alliance Advanced Technology Group
- VCU Plant Operations/Operating Room Wiring Initiatives
- Yale University Telemedicine Advisory Board
- Yale University NASA/CSC Technology Committee
- Yale University NASA/Space Biomedical Center Joint Oversight Committee - technical advisor

### **Awards and Acknowledgements**

Finalist – Infineon Technology Innovation Award; Greater Richmond Technology Council; 2003  
Technical/Network Design – Kosovo Foundation for Medical Development, Kosovo, Yugoslavia  
Special Recognition – Western Regional Medical Authority, Jamaica  
Special Recognition – Moscow State Medical University, Moscow, Russia

### **B. Selected peer-reviewed publications (in chronological order)**

1. Low-Bandwidth Telemedical Techniques for Extreme Telemedicine Application. American College of Surgeons J, 189(4): 397-404. 1999
2. 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, 6(3):303-313. 2000
3. 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. 72(12):1132-1137. 2001
4. 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, 7(1):47-53. 2001
5. Broderick TJ, Harnett BM, Doarn CR, Rodas EB, Merrell RC. Real Time Internet Connections: Implications for Surgical Decision Making in Laparoscopy. Annals of Surg 243 (2):165-171. 2001
6. 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. 72(12):1125-1131. 2001
7. 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, 8(1):131-137, 2002
8. 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, 1:3. 2002
9. 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
10. 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
11. Harnett BM, Broderick T, Doarn CR, Rafiq A, Muth T, Merrell RC. Dynamic automated data collection for human performance. J Information Technology in Healthcare. 2(3):175-186. 2004
12. Harnett, BM. Telemedicine Systems and Telecommunications. J of Telemedicine and Telecare. 12(3):4-15. 2006
13. 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)
14. 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

### **Book Chapters**

1. 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
2. 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
3. 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
4. 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

### **Abstracts/Posters**

1. Rodas E, Rafiq, A, Doarn CR, Harnett B, Merriam N, Merrell RC, Broderick, TJ, Surgical Simulation in Microgravity. SAGES. Denver, CO. March 2004. Video Abstract
2. 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.
3. 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.
4. 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
5. 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, January 2005
6. 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. April 2005. Telemed and E Health 2005; 11(2):247
7. 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, February 2007
8. 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
9. 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. February 2007
10. 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. February 2007
11. Doarn CR, Harnett BM, Broderick TJ. Telesurgery: What are the Possibilities? 12th Annual Meeting and Exposition of the American Telemedicine Association, Nashville, TN - May 2007. Telemed and E Health 2007; 12(2):190

### **C. Research Support**

Principle Investigator: A Mobile Neural Network for Real-time Physiologic Monitoring. Funding Agency - University of Cincinnati Faculty Research Support Program \$6,500. January 2006

Co-PI: High Altitude Platforms Mobile Robotic Telesurgery. Funding Agency - US Army Medical Research and Materiel Command \$217,000. April 2005