Mark A. Hanson, Ph.D.

Entrepreneur, Investor, Researcher, & Engineer

XXXXXXXXXXXXXXXX.com | www.markahanson.com | 703.XXX.XXXX

PROFILE

I am a Founder and Managing Partner of Fast Rope Labs, a skunkworks-as-a-service, research, design, and development startup in Washington, DC. FRL has created products and services used by thousands of people for major commercial brands, non-profits, and government agencies, such as Upside Travel, Keurig, Verité, Network for Good, the US State Department, and the City of Boston. Our work has been featured in Forbes, USA Today, CNN, TechCrunch, Bloomberg, and Fortune.

I am also an adjunct professor and researcher of medicine and engineering at The George Washington University. I have authored 18 peer-reviewed publications, cited over 1,000 times, and I am an inventor on numerous US patents. In 2016, I was a General Chair for the International Workshop on Big Data Analytics for Smart and Connected Health. Under the advisement of Professor John Lach, I completed my Ph.D. in electrical and computer engineering as an ARCS Scholar and recipient of the University's Award for Excellence in Scholarship in the Sciences and Engineering. I was a founding member of the NIH and NSF sponsored Center for Wireless Health, and I held research appointments in both the School of Medicine and the School of Engineering and Applied Science. I specialized in the design and application of wearable sensors for assessment and relief of movement disorders resulting from Parkinson's and essential tremor, normal pressure hydrocephalus, multiple sclerosis, and mild traumatic brain injury. I created TEMPO, a medical technology utilized in neurosurgical, psychiatric, and orthopedic clinical trials at major health institutions, including the UVA Health System and the Carilion Clinic. My work was covered by Computer Magazine, Healthcare IT News, and Medgadget.

I was previously a Co-Founder at BeClose, a venture-backed health tech startup, which developed internet of things hardware and cloud-hosted artificial intelligence, to promote healthy, independent living. Recognized by Frost & Sullivan as one of the most significant innovations disrupting healthcare, BeClose worked with high profile payors, including CMS and United Healthcare. BeClose was featured in TechCrunch, Fast Company, Gigaom, The New York Times, CNN, NPR, and USA Today. Covered by VentureBeat, USA Today, and announced at the Consumer Electronics Show, BeClose was spun-in to Alarm.com as Alarm.com Wellness in January of 2014. Alarm.com Wellness was prominently featured in testimony to the United States Senate Special Committee on Aging. I spearheaded strategic special projects and advised C-level executives during the Alarm.com IPO in 2015.

Finally, I am a venture partner at NextGen Venture Partners and a member of the UVA SEAS Entrepreneurship Advisory Board and the ECE External Advisory Board.

EDUCATION

University of Virginia

2009 **Ph.D. Electrical Engineering, Computer Engineering Concentration**

Under the advisement of Professor John Lach, I led graduate research into wireless body area sensor network innovations for clinical applications.

2003 **B.S. Electrical Engineering, Computer Engineering**

Under the advisement of Professor John Lach, I led undergraduate research into wearable innovations for life science applications.

EXPERIENCE

Fast Rope Labs

2015 – PRESENT **Founder and Managing Partner**

I am a Founder and Managing Partner of Fast Rope Labs, a scientific and technical research, design, and development startup based in Washington, DC. With a focus on first principles research and innovation, design and strategy, and development and growth, Fast Rope Labs has created products and services used by thousands of people for major commercial brands, non-profits, and government agencies, such as Upside Travel, Mohegan Sun Resort & Casino, Keurig, Wodify, Verité, Network for Good, the US State Department, and the City of Boston. Our work has been featured in Forbes, USA Today, CNN, TechCrunch, Bloomberg, and Fortune.

NextGen Venture Partners

2015 – PRESENT **Venture Partner**

I am an active angel investor and a Venture Partner at NextGen Venture Partners in Washington, DC. I serve on numerous investment committees for startups across a range of industries, assist in due diligence, and advise portfolio companies. I have participated in seed and series A investment rounds for startups and small businesses such as: Avizia, Atlas Lane, and Kramerbooks and Afterwords Café.

George Washington University

2015 – PRESENT **Adjunct Assistant Professor, Medicine and Engineering**

I am an Adjunct Assistant Professor with joint appointments in the School of Medicine and Health Science and the School of Engineering and Applied Science at

The George Washington University. Along with Dr. Neal Sikka, I developed curriculum materials and lectured for the "Mobile Health Care: Innovations in Telemedicine" course. I also compiled a comprehensive data-driven statistical analysis of all 17 GW MFA locations to assess their viability and efficacy and to formulate, with MFA leadership, a data-driven executive operations and expansion strategy for the Department of Emergency Medicine. In 2016, I was a General Chair for the International Workshop on Big Data Analytics for Smart and Connected Health.

Georgetown University McDonough School of Business

2016 – 2017 **Founding Member, Advisor, and Mentor, Signal Class**

Along with a team including Shane Mac, Tucker Max, Jeff Reid, and Professor Eric Koester, I helped to create a brand new, highly innovative teaching method and class encouraging students to become subject matter experts and authors. Mentored 6 students, 4 of whom went on to author Amazon Best Selling books.

Alarm.com (NASDAQ:ALRM)

2014 – 2015 **Director of Product Management, Platforms and Health Innovations**

I was the Director of Product Management for Platforms and Health Innovations at Alarm.com, an internet of things cloud service provider, with 2.5 million customers, spanning interactive security, energy management, video monitoring, intelligent automation, and wellness applications. In my role, I advised and reported directly to C-level executives during the initial public offering period. I spearheaded the design, development, manufacturing, and launch of strategic, high visibility hardware and software special projects and platforms, with million-unit hardware sales and eight-figure SaaS revenue potential. Two projects under my management were designated as the company's highest product priorities post-IPO, and I helped to oversee their completion in under 18 months, as well as the creation of a global manufacturing supply chain. I joined the company pre-IPO, architecting and shepherding the seamless integration of BeClose into Alarm.com Wellness. Alarm.com Wellness was a top five business focus of the company, and was prominently featured in testimony to the United States Senate Special Committee on Aging.

BeClose (Now Alarm.com)

2009 – 2014 **Co-Founder and Head of Technology and Product**

I was a Co-Founder and the Head of Technology and Product at BeClose, a venture-backed health tech startup, which developed internet of things hardware and cloud-hosted artificial intelligence, to promote healthy, independent living. Recognized by

Frost & Sullivan as one of the most significant innovations disrupting healthcare, BeClose worked with high profile payors, including CMS and United Healthcare. BeClose was featured in TechCrunch, Fast Company, Gigaom, The New York Times, CNN, NPR, and USA Today. Covered by VentureBeat, USA Today, and announced at the Consumer Electronics Show, BeClose was spun-in to Alarm.com as Alarm.com Wellness in January of 2014.

University of Virginia

2004 – 2009 **Graduate Research Assistant, Electrical and Computer Engineering**
2004 **Graduate Research Assistant, General Medicine, Geriatrics, and Palliative Care**

I designed wearable sensors for assessment and relief of movement disorders, such as Parkinson's and essential tremor. I created TEMPO, a clinical technology that has been utilized in neurosurgical, psychiatric, and orthopedic clinical applications at major health institutions. I was one of our Department's first students to attack fundamental problems at the boundary of the clinical sciences and engineering, and I was the only student to hold research assistantships in both engineering and medicine. My research was initially bootstrapped, but the research group that I helped to found, the Center for Wireless Health, has since received millions of dollars in NIH and NSF grants. My work has resulted in over a dozen peer-reviewed publications and has been covered by Computer magazine, Healthcare IT News, and Medgadget.

2008 **Graduate Teaching Assistant, ECE 333 – Computer Architecture**

Following the success of a curriculum overhaul of ECE 436 – Advanced Digital Design, I led the overhaul of the ECE 333 curriculum, including the of creation of new course materials based on co-design of MIPS hardware and software. The curriculum has since been used to teach hundreds of students. I also served as the lead teaching assistant for the course, overseeing instructional labs, office hours, exam reviews, and lecture preparation.

2002 – 2003 **Undergraduate Research Assistant, Electrical and Computer Engineering**

As one of very few undergraduate students to be selected as a research assistant at the University, I conducted research into ultrasound and electromagnetic motion capture for life science applications. I also developed a first of its kind Bluetooth-enabled, mixed-signal, heterogeneous sensing platform to continuously measure fluctuations in cognitive abilities, heart rate, blood pressure, ambient sound, light, and temperature. My research resulted in prominent University recognition and my first publication.

2003 **Undergraduate Teaching Assistant, ECE 436 – Advanced Digital Design**

As one of very few undergraduates to be selected as a teaching assistant at the University, I spearheaded an overhaul of the entire course curriculum for the

culminating design experience. I created an instructional 16-bit RISC ISA, named Jackal, authored all course materials, and secured $10,000 of FGPA hardware and EDA software donations from Xilinx. Final course evaluations were unanimously positive, the course was recognized in a University teaching award, and the curriculum has been used to teach hundreds of students.

SERVICE AND ACTIVITIES

Journals

2009 – PRESENT **Referee**

ACM Transactions on Sensor Networks (ACM TOSN)
ACM Transactions on Embedded Computing Systems (ACM TECS)
IEEE Transactions on Biomedical Engineering (IEEE TBME)
IEEE Transactions on Information Technology in Biomedicine (IEEE TITB)
IEEE Transactions on Biomedical Circuits and Systems (IEEE TBCAS)
IEEE Transactions on Journal on Selected Areas in Communications (IEEE JSAC)
Special Issue on Economics of Communication Networks and Systems
Pervasive and Mobile Computing Journal (PMC)
Sensors

Conferences

2016 **General Chair**

International Workshop on Big Data Analytics for Smart and Connected Health (BIGDATA4HEALTH)

2011 **Technical Program Committee Member**

2011 International Conference on Body Sensor Networks (BSN)

2011 **Session Chair**

Interference-Guided Wireless Health, Wireless Health 2011

Competitions

2015 **Judge**

The University of Virginia Entrepreneurship Cup (E-Cup)

2015 **Judge**

The Lindsay Institute's Intercollegiate Caring for the Caregiver Hack: Advancing Caregiver Health Through Innovations

2014 **Judge**

University of Virginia Hoos Health Hack: Second Annual Medical Hackathon

---

University of Virginia

2016 – PRESENT **Member, ECE External Advisory Board (ECE EAB)**

I was selected to serve as a board member representing external interests for the University 's Electrical and Computer Engineering Department. The ECE EAB advises the Department in academic policy and curriculum design, translational research, and professional opportunities for students. Prominent members of the 9-member board include Neda Cvijetic, Systems Architect at Tesla, Joseph Mait, Chief Scientist at Army Research Labs, and Robert Heath, chaired Professor of Electrical and Computer Engineering at the University of Texas at Austin.

2015 – PRESENT **Member, SEAS Entrepreneurship Advisory Board (SEAS EAB)**

I was selected to serve as a board member in the University's preeminent forum for technology entrepreneurship. The SEAS EAB advises the School of Engineering and Applied Science in technology entrepreneurship policy and curriculum design, connects students and alumni who are interested in technology entrepreneurship, and advocates for entrepreneurial venture initiatives at the University and state levels. Prominent members of the 13-member board include Carl Showalter, COO at Fetch Robotics, Steve Huffman, Co-Founder and CEO of Reddit, and Doug Garland, a former Google Vice President and General Manager of Stadium Experience and Technology for the San Francisco 49ers.

2008 – 2009 **Co-Founder and Executive Director, Virginia Entrepreneurial Society (E*Society)**

I co-founded the first of its kind pan-University entrepreneurial society open to all members of the University community. I chartered a mission, drafted a constitution, and secured University Contracted Independent Organization (CIO) status and $7500 in annual funding from University administrators at the VP and Dean level. Within the first year, the E*Society hosted events that were among the University's most visible and highly attended, attracting hundreds of students, faculty members, University administrators, and investors. Members of the E*Society have gone on to attract angel, VC, and Y Combinator investments for numerous startups. The E*Society still lives on as a lasting University institution.

2008 – 2009 **Student Representative to the Graduate Committee, Electrical and Computer Engineering Faculty Council**

I was selected by the Electrical and Computer Engineering Graduate Committee Chair to represent the interests of the graduate student body in faculty-level discussions about academic policy. I spearheaded efforts to create a vibrant research culture and advised the Graduate Program Director on improving the graduate admissions process.

2006 – 2009 **Co-Founder and Co-Chair, Electrical and Computer Engineering Student Council (ECESC)**

I co-founded a student council that served as an interface between 150 graduate students, faculty, and University administrators. I chartered a mission, drafted a constitution, and secured University Contracted Independent Organization (CIO) status and $3000 in annual funding for numerous events. I served as a student liaison to the Department Industrial Advisory Board (IAB) and assisted in graduate student recruiting efforts, which resulted in a more selective matriculating class.

2008 **General Chair, Fourth Annual University of Virginia Engineering Research Symposium (UVERS)**

I served as the General Chair of the University's prestigious Engineering Research Symposium. I worked with the University of Virginia Office of the Vice President for Research and Graduate Studies to secure $5000 for the event, and I recruited a panel of distinguished judges, including the former President Emeritus of the National Academy of Engineering. I oversaw the solicitation of abstracts, selection of finalists, and preparation of venue. The Symposium was attended by hundreds of members of the University community and received prominent media coverage.

2007 – 2008 **Chair, Graduate Engineering Student Council**

I was elected as the Chair of a council that represents over 700 students from the Graduate School of Engineering and Applied Science. I managed a budget of over $20,000, organized 15 major events, and worked with the Dean's office to foster new academic and professional opportunities for the student body as well as increased student participation in the University's Capital Campaign.

MEMBERSHIPS AND AFFILIATIONS

Association for Computing Machinery (ACM)

2010 – PRESENT **Member**

2002 – 2009 **Student Member**

Institute for Electrical and Electronics Engineers (IEEE)

2010 – PRESENT **Member, Computer Society**

2010 – PRESENT **Member**

2008 – 2009 **Student Member, Computer Society**

2002 – 2009 **Student Member**

University of Virginia

2009 **Founding Member, Center for Wireless Health**

2007 – 2009 **Student Affiliate, NSF-Sponsored Wireless Internet Center for Advanced Technology (WICAT)**

2004 – 2009 **Student Affiliate, Institute on Aging (UVA IOA)**

HONORS AND AWARDS

2011 **Finalist, Best Paper Award, Wireless Health 2011**

Recognized within the top 2 of 14 peer-reviewed, accepted papers for research on "Continuous, Non-Invasive Assessment of Agitation in Dementia Using Inertial Body Sensors"

2010 **Award for Technology Innovation of the Year, Frost & Sullivan**

BeClose system and its applications in the "aging independently" environment receive Award for Technology Innovation of the Year

2009 **Inductee, Sigma Xi: Scientific Research Society**

Inducted into the international honorary society that recognizes excellence in scientific investigation among researchers in all fields of science and engineering

2009 **Inductee, Tau Beta Pi (TBP): Engineering Honor Society**

Inducted into the national honorary society that recognizes distinguished scholarship and exemplary character in the engineering field

2009 **Inductee, Eta Kappa Nu (HKN): Electrical and Computer Engineering Honor Society**

Inducted into a national honorary society, which recognizes exceptional academic and professional excellence in the electrical and computer engineering field

2009 **Finalist, Fifth Annual University of Virginia Engineering Research Symposium (UVERS)**

Selected within the top 10 of 51 participants of a prestigious engineering and applied science graduate research symposium for presentation of advancements made to the field of body area sensor networks

2009 **Finalist, Darden-UVA Business Plan Competition**

Selected within the top 7 of 32 teams in a highly competitive pan-University business plan competition for presentation of Energy Guardian, LLC

2009 **Inductee, Raven Society**

Inducted into the oldest and most prestigious honorary society at the University of Virginia, which recognizes superior academic and extra-curricular achievement

2008 – 2009 **Raytheon Company Scholar, Achievement Reward for College Scientists (ARCS) Foundation**

Selected from a highly competitive national pool to receive a $15,000 corporate-sponsored graduate fellowship for research that promotes the advancement of science and engineering

2008 **Recipient, Award for Excellence in Scholarship in the Sciences and Engineering**

Selected from a highly competitive pan-University pool to receive a prestigious $5,000 award that recognizes scholarship in the sciences and engineering and academic merit

2007 – 2008 **Scholar, Achievement Reward for College Scientists (ARCS) Foundation**

Selected from a highly competitive national pool to receive a $15,000 graduate fellowship for research that promotes the advancement of science and engineering

2001 **First Place, Microsoft-Sponsored Fourth Annual Robot Games**

Designed and developed a multithreaded, networked robot control system that placed first in a highly-competitive computer science competition

Issued Patents

4. M.A. Hanson, C. Silverman, A.T. Barth, “Health and Wellness Management Technology,” U.S. Patent 9501613 B1, November 22, 2016

3. M.A. Hanson, A.T. Barth, S.A. Ridenour, P.M. Wempe, “Force Sensitive Occupancy Sensing Technology,” U.S. Patent 8919211 B1, December 30, 2014

2. M.A. Hanson, E.L. Manson, “Medication Management and Reporting Technology,” U.S. Patent 8810408 B2, August 19, 2014

1. M.A. Hanson, J. Martin, A.T. Barth, C. Silverman, “Fall Detection and Reporting Technology,” U.S. Patent US 8675920 B2, March 18, 2014

Submitted Theses

2. M.A. Hanson, "Wireless Body Area Sensor Network Technology for Motion-Based Health Assessment," University of Virginia, Doctoral Dissertation, 2009

1. M.A. Hanson, "Examining a Distributed Information Model as a Solution for Effective Information Dissemination and Acquisition on the World Wide Web," University of Virginia, Undergraduate Thesis, 2002

Refereed Journals

4. M.A. Hanson, H.C. Powell Jr., A.T. Barth, J. Lach, "Application-Focused Energy-Fidelity Scalability for Wireless Motion-Based Health Assessment," ACM Transactions on Embedded Computing: Special Issue on Wireless Health Systems," Vol. 11, Iss. S2, No. 50, 1-21, August 2012

3. Y. Zhang, Y. Shakhsheer, A.T. Barth, H.C. Powell Jr., S.A. Ridenour, M.A. Hanson, J. Lach, B.H. Calhoun, "Energy Efficient Design for Body Sensor Nodes," Journal of Low Power Electronics and Applications: Selected Topics in Low Power Design - From Circuits to Applications," Vol. 1, No. 1, 109-130, April 2011

2. H.C. Powell Jr., M.A. Hanson, J. Lach, “On-Body Inertial Sensing and Signal Processing for Clinical Assessment of Tremor,” IEEE Transactions on Biomedical Circuits and Systems (TBCAS), Vol. 3, No. 2, 108-116, April 2009

1. M.A. Hanson, H.C. Powell Jr., A.T. Barth, K.M. Ringgenberg, J.H. Aylor, B.H. Calhoun, J. Lach, “Body Area Sensor Networks: Challenges and Opportunities,” IEEE Computer, Vol. 42, No. 1, 58-65, January 2009

Refereed Proceedings

14. R. Alam, J. Gong, M.A. Hanson, A. Bankole, M. Anderson, T. Smith-Jackson, J. Lach, "Motion Biomarkers for Early Detection of Dementia-Related Agitation," First ACM Workshop on Digital Biomarkers, accepted for publication, 2017

13. E. Hoque, R.F. Dickerson, A. Barth, M. Hanson, J.A. Stankovic, "Holmes: A Comprehensive Anomaly Detection System for Daily In-Home Activities," International Conference on Distributed Computing in Sensor Systems (DCOSS), 40-51, 2015

12. M.A. Hanson, A.T. Barth, C. Silverman, "In Home Assessment and Management of Health and Wellness with BeClose Ambient, Artificial Intelligence," Wireless Health 2011, No. 25, 2011

11. A. Bankole, M. Anderson, A. Knight, K. Oh, T. Smith-Jackson, M.A. Hanson, A.T. Barth, J. Lach, "Continuous, Non-Invasive Assessment of Agitation in Dementia Using Inertial Body Sensors," Wireless Health 2011, No. 1, 2011

10. A.T. Barth, M.A. Hanson, H.C. Powell, J. Lach, "Online Data and Execution Profiling for Dynamic Energy-Fidelity Optimization in Body Sensor Networks," Seventh International Workshop on Wearable and Implantable Body Sensor Networks (BSN), 213-218, 2010

9. M.A. Hanson, H.C. Powell Jr., A.T. Barth, J. Lach, M. Brandt-Pearce, “Neural Network Gait Classification for On-Body Inertial Sensors,” Sixth International Workshop on Wearable and Implantable Body Sensor Networks (BSN), 181-186, 2009

8. A.T. Barth, M.A. Hanson, H.C. Powell, J. Lach, "TEMPO 3.1: A Body Area Sensor Network Platform for Continuous Movement Assessment," Sixth International Workshop on Wearable and Implantable Body Sensor Networks (BSN), 71-76, 2009

7. Q. Li, J.A. Stankovic, M.A. Hanson, A.T. Barth, J. Lach, G. Zhao, "Accurate, Fast Fall Detection Using Gyroscopes and Accelerometer-Derived Posture Information," Sixth International Workshop on Wearable and Implantable Body Sensor Networks (BSN), 138-143, 2009

6. M.A. Hanson, H.C. Powell Jr., A.T. Barth, J. Lach, “Enabling Data-Centric Energy-Fidelity Scalability for Wireless Body Area Sensor Network,” ICST Fourth International Conference on Body Area Networks (BodyNets), article no. 16, 2009

5. A.T. Barth, M.A. Hanson, H.C. Powell Jr., D. Unluer, S. Wilson, J. Lach, “Body-Coupled Communication for Body Sensor Networks,” ICST Third International Conference on Body Area Networks (BodyNets), article no. 12, 2008

4. M.A. Hanson, H.C. Powell Jr., R.C. Frysinger, D.S. Huss, W.J. Elias, J. Lach, “Teager Energy Assessment of Tremor Severity in Clinical Application of Wearable Inertial Sensors,” IEEE/NIH BISTI Third Life Science Systems and Applications Workshop (LiSSA), 191-194, 2007

3. H.C. Powell Jr., M.A. Hanson, J. Lach, "A Wearable Inertial Sensing Technology for Clinical Assessment of Tremor," IEEE Biomedical Circuits and Systems Conference (BioCAS), 9-12, 2007

2. M.A. Hanson, J. Lach, "Assessing Joint Time-Frequency Methods in the Detection of Dysfunctional Movement," Fortieth Annual Asilomar Conference on Signals, Systems, and Computers (ACSSC), 1870-1874, 2006

1. J. Lach, J.H. Aylor, N. Merris, M.A. Hanson, C. Rehorn, "Wearable Gait Data Collection for Longitudinal Fall Analysis," International Conference on Aging, Disability and Independence (ICADI), 481-489, 2003

Invited Presentations

30. M.A. Hanson, "From Research to Revenue," University of Virginia Charles L. Brown Department of Electrical and Computer Engineering Seminar, invited talk, 2015

29. M.A. Hanson, "Mobile Health: Innovations in Telemedicine," George Washington University Summer Institute, panelist, 2015

28. M.A. Hanson, J. Kohlenberger, J. Garcia, A. Remsen, "The Connected Life," Modev Wearables + Things, panelist, 2014

27. M.A. Hanson, "From the Whiteboard to the Board Room," University of Virginia Medical Hackathon, invited talk, 2014

26. M.A. Hanson, "Mobile Health: Innovations in Telemedicine," George Washington University Summer Institute, panelist, 2014

25. M.A. Hanson, S. Damani, K. Petty, "The Human Equation: Cultivating High-Impact Results," Digital Health Summer Summit, panelist, 2014

24. M.A. Hanson, I. Fanlo, D. Jones, F. Maxik, L. Suennen, "Home Sweet Radical Home," CES Silvers Summit, panelist, 2014

23. M.A. Hanson, A.T. Barth, "Industry Perspectives from the Front Line of Wireless Health," University of Virginia Center for Wireless Health, invited talk, 2013

22. M.A. Hanson, "Mobile Health: Innovations in Telemedicine," George Washington University Summer Institute, panelist, 2013

21. M.A. Hanson, "BeClose," DC Tech Meetup: Health Tech Edition, invited talk, 2013

20. H.W. Lach, R.A. Lorenz, K. Rose, M.A. Hanson, A.T. Barth, "Patterns of Activity and Rest in Older Adults as Measured by a Home Monitoring System," Gerontologist, accepted abstract and poster presentation, 2012

19. M.A. Hanson, "Caregiving 2.0: Innovations for Independence at Home," The Fairfax Area Long Term Care Coordinating Council, invited talk, 2012

18. M.A. Hanson, “Caregiving 2.0,” Aging 2.0 Washington, D.C. Meetup, invited talk, 2012

17. M.A. Hanson, “Wireless Wellness: Innovations in Caregiving Technologies for Aging in Place,” Annual Meeting of the National Association for Home Care & Hospice, invited talk, 2012

16. M.A. Hanson, "Mobile Health: Innovations in Telemedicine," George Washington University Summer Institute, panelist, 2012

15. M.A. Hanson, N. Wechsler, C. Crump, C. Spanos, "Staying Connected While Aging in the Digital Era," Aging in America, the 2012 Annual Conference of the American Society on Aging (ASA 2012), panelist, 2012

14. M.A. Hanson, A.T. Barth, C. Silverman, "In Home Assessment and Management of Health and Wellness with BeClose Ambient, Artificial Intelligence," Wireless Health 2011, accepted paper and demonstration, 2011

13. M.A. Hanson, "From the Drawing Board to the Board Room: Perspectives on Wireless Health and Body Area Sensor Network Commercialization," University of Virginia Special Topics in Electrical and Computer Engineering, invited talk, 2010

12. A.T. Barth, M.A. Hanson, H.C. Powell Jr., J. Lach, "TEMPO 3: A Body Area Sensor Network Platform for Continuous Movement Assessment," Sixth International Workshop on Wearable and Implantable Body Sensor Networks (BSN), invited demonstration, 2009

11. M.A. Hanson, “Application-Focused Quality-of-Service Management for Energy-Efficient Movement Disorder Assessment in Body Area Sensor Networks,” University of Virginia Fifth Annual Engineering Research Symposium (UVERS), accepted abstract and poster presentation, 2009

10. A.T. Barth, M.A. Hanson, H.C. Powell Jr., J.H. Aylor, J. Lach, "Wearable Technologies for Assessment of Movement Disorder," University of Virginia Institute on Aging: Forum on Aging Research, invited demonstration, 2009

9. M.A. Hanson, A.T. Barth, “How Things Work: From Sensors to Systems,” University of Virginia Technology Leaders Program (TLP), invited talk, 2009

8. M.A. Hanson, “Body Area Sensor Networks: Realizing Human 2.0,” Johns Hopkins University Applied Physics Laboratory (APL), invited talk, 2008

7. M.A. Hanson, J. Lach, "Reengineering Healthcare: Wireless Body Sensor Networks for Movement Disorder Assessment," The Colonnades: A Sunrise Senior Living Community, invited talk, 2008

6. M.A. Hanson, H.C. Powell Jr., A.T. Barth, J.H. Aylor, J. Lach, “Microwatts to Megawatts: Virtual Instrumentation for Low-Power Body Area Sensor Networks and a High-Power Electromagnetic Energy Conversion Laboratory,” National Instruments Worldwide Graphical System Design Conference and Exhibition (NIWeek), accepted abstract and poster presentation, 2008

5. M.A. Hanson, M. Anderson, D.B. Trinkle, J. Lach, "Quantitative, Continuous Agitation and Akathisia Assessment with Body Sensor Networks," First Annual Carilion Clinic Research Day, accepted abstract and poster presentation, 2008

4. J. Lach, M.A. Hanson, A.T. Barth, “Toward Improving the Wearability and Battery Life of Wireless Body Area Sensor Networks,” Philips Research North America, invited talk, 2007

3. M.A. Hanson, “Wearable Healthcare Technology Meets Gaming: Discussing Prevention Through Assessment and Entertainment,” ACM Conference on Human Factors in Computing Systems (CHI) Workshop: HCI Challenges in Health Assessment, invited talk, 2005

2. M.E. Williams, J.E. Owens, H. Groninger, E. Parker Jr., M.A. Hanson, "Patterns of Gait Kinetic Energy Associated with Geriatrician Rating of Vulnerability," Annual Scientific Meeting of the American Geriatrics Society (AGS), accepted abstract and poster presentation, 2004

1. J.H. Aylor, J. Lach, M.A. Hanson, C. Rehorn, “Wearable Technologies for Aged Independence,” Spring Meeting of the School of Engineering and Applied Sciences Trustees, invited talk, 2003