

Dr. Steven J. Stanhope

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MARITAL STATUS

Married with two children

EDUCATION

- 1985 University of Maryland at College Park -- Ph.D. Degree
Concentrations: Biomechanics, Human Anatomy, and Exercise Physiology
- 1983 Externship in Neurosurgery, St. Joseph's Hospital, Providence, RI.
Summer clinical neurosurgical externship program
- 1982 University of Maryland at College Park -- M.A. Degree
Concentrations: Biomechanics and Exercise Physiology
- 1980 Boston University -- B.S. Degree
Human Movement Studies
- 1976 United States Naval Academy – Midshipman
Honorable Discharge

PROFESSIONAL EXPERIENCE

- 2013-present Associate Deputy Provost for Research and Scholarship, University of Delaware, Newark, DE
- 2007-present Full Professor, University of Delaware, Newark, DE
Departments of:
Kinesiology and Applied Physiology,
Mechanical Engineering,
Biomedical Engineering,
Biomechanics and Movement Science Interdisciplinary Graduate Program
- 2012-2013 Co-Founder and Chief Technology Officer, Intelligent Digital Manufacturing, L.L.C., Wilmington, DE.
- 2008-2009 Interim Dean, College of Health Sciences (CHS), University of Delaware, Newark, DE.
- 2007-2008 Interim Dean Designate, College of Health Sciences, University of Delaware, Newark, DE.
- 2001-2007 Founding Director, Physical Disabilities Branch, National Institutes of Health,

Bethesda, MD.

- 1991-1997 Senior Staff, Arthritis and Rheumatism Branch, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), National Institutes of Health, Bethesda, MD.
- 1985-2001 Founding Director, Biomechanics Laboratory, Rehabilitation Medicine Department, Warren Grant Magnuson Clinical Center, National Institutes of Health, Bethesda, MD.

INITIATIVES & PARTNERSHIPS: 2007-present

- 2012-present *Omnibus Cooperative Research and Development Agreement (CRADA):*
In collaboration with the Chief, Medical Research Law, Office of the Staff Judge Advocate, U.S. Army Medical Research and Materiel Command (USAMRMC) and in support of the BADER Consortium, developed and implemented a CRADA between the University of Delaware and medical treatment and research facilities across the Department of Defense (DoD), U.S. Department of Veterans Affairs (VA), academia and an array of industrial partners.
- 2012-present *Collaboration Agreement (CA)* between the University of Delaware and the Eunice Kennedy Shriver National Institute for Child Health and Human Development (NICHD), National Institutes of Health to work collaboratively towards the application of the NICHD Clinical Trials Data Base (“CTDB”) to extramural research being conducted as part of the BADER Consortium’s mission.
- 2012-present *STRiDE (Supporting Translational Research in Delaware) initiative:*
Founder and Director (<http://inbre.udel.edu/humansubjects.html>). This regional initiative is funded by the Office of the Governor, State of Delaware and serves to establish regional excellence in clinical and translational research partnerships.
- 2009-present *General Agreement:* Founder and Principal Coordinator of agreement between the Azienda Unita Sanitaria Locale 11 di Empoli (AUSL11), a local health authority in the Tuscan region of Italy and the University of Delaware. The general agreement includes areas of teaching, research, faculty and student exchanges.
- 2008-present *Cooperative Research and Development Agreement (CRADA) between the U.S. Army RDECOM, Edgewood Chemical Biological Center (ECBC), Advanced Design and Manufacturing (ADM) division and the College of Health Sciences & Center for Composite Materials, University of Delaware.* Principal Investigator of a CRADA to jointly explore the use of rapid prototyping technologies and advanced materials science for the development of custom dynamic lower leg braces.
- 2007-present *Luminary Site Agreement between the College of Health Sciences and C-Motion, Inc.* Principal Investigator of an agreement with C-Motion, Inc. to promote the University’s culture of discovery and innovation through a symbiotic relationship between student education, research, globally directed training, technological innovation, and career skill development focused on a globally-oriented research and education experience.

INITIATIVES & PARTNERSHIPS: prior to 2008

- 2003-2007 *Memorandum of Understanding between the National Institutes of Health and the Istituto Superiore di Sanita of the Italian Republic.* Principal coordinator of a Medical Rehabilitation Research Collaboration with Italy and the National Institutes of Health.
- 2003-2007 *Interagency Disability and Rehabilitation Research Initiative (DRRI):* Principal coordinator of activities under a memorandum of understanding which established a framework for a cooperation across the spectrum of disabilities research between The National Institute on Disability and Rehabilitation Research (NIDRR), Department of Education and the Physical Disabilities Branch, NIH. This agreement, established 6/2/2003 created an administrative procedure for the development, documentation, approval, support, execution, and review of supportive activities; collaborative research projects, and policy, educational and consensus building initiatives involving NIDRR and the Physical Disabilities Branch.
- 2001-2007 *Physical Disabilities Branch (PDB):* Founder and coordinator of activities, under a Memorandum of Understanding creating the Physical Disabilities Branch in January 2001. The agreement stipulated the justification, activities, goals, and the base level of support for the Physical Disabilities Branch. The scope of this initiative included the Warren G. Magnuson Clinical Center, the National Institute of Child Health and Human Development, and the National Center for Medical Rehabilitation Research. Annual funding level was \$2.4 million.
- 1991-1993 *Rehabilitation Research Collaboration with Brazil:* Principal coordinator for the NIH, cooperation regarding the facilitation of joint research and training, information exchange, and scientific visits related to rehabilitation medicine research between SARAH-National Institute for Medicine of the Locomotor System, Brasilia, Brazil and the National Institutes of Health.

PROFESSIONAL ACTIVITIES

Leadership Activities: University of Delaware

- 2012-present Team Leader, Prosthetics & Orthotics Professional Master's Program Development, University of Delaware
- 2012-present Director, STRiDE (Supporting Translational Research in Delaware) initiative (<http://inbre.udel.edu/humansubjects.html>)
- 2011-present Director of the BADER Consortium (www.bader-c.org),
- 2013-present Director: Delaware INBRE (<http://inbre.udel.edu/>)
- 2010-2013 Director of Research & Program Coordinator: Delaware INBRE (<http://inbre.udel.edu/>)
- 2008-2013 Delaware Health Sciences Alliance Research & Development Task Force. (<http://www.delawarehsa.org/>)
- 2008-2009 Scientific advisor to the National Children's Health Study – UD component.

2008-2009 Research Integrity Officer, University of Delaware.

Student Engagement: University of Delaware

2012-present Faculty Advisor, UD Sailing Club/Team

2014-present Faculty Advisor, UD Orthotics & Prosthetics Club

Institute & Center Appointments: University of Delaware

2010-present Delaware Rehabilitation Institute (DRI)

2010-present Center for Biomedical Engineering Research (CBER)

2008-present Delaware Biotechnology Institute (DBI)

Committees: University of Delaware:

2009-present Steering Committee: Delaware INBRE Network

2009-present Steering Committee: Delaware Rehabilitation Institute.

2008-present Member, Department of Kinesiology and Applied Physiology, Promotion and Tenure Committee

2008-present UD Research Council

2007-present Aging Cross College Cluster

2010-2011 Chairman, College of Health Sciences, Promotion and Tenure Committee.

2010-2011 University of Delaware Honors Program Committee Member.

2007-2009 Delaware Biotechnology Institute Research Advisory Board

2008-2009 Early Learning Center Advisory Board

2008 Delaware Biotechnology Institute, Director search committee member

2008 Center for Disabilities Studies, Director search committee member

Committees: External Advisory

2012-present DoD, Telemedicine and Advanced Technology Research Center (TATRC) LEGS (Lower Extremity Gait System) initiative, Technical Interchange Team, Frederick, MD

2012-present Amputee Coalition, Advisory Committee on Evidenced-Based Outcomes, Manassas, VA

2010-present Scientific Advisory Board Member, Center for Translation of Rehabilitation Engineering Advances and Technology (TREAT) - SIMBEX Inc. Lebanon, NH. Funded through the Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH, Bethesda, MD

2008-2009 Founding Member, Delaware Health Sciences Alliance Executive Committee, Newark, DE

2008-2009 Delaware Institute for Medical Ed. and Research (DIMER) Board Member, Delaware Health Care Commission, Dover, DE

2000-2009 Advisory Board Member, Biomedical Engineering Department, Catholic University of America, Washington, DC

2004-2007 Member of the Scientific Advisory Committee – National Institutes of Health,

- Clinical Research Center, Bethesda, MD
- 1998-2004 Advisory Board Member, the Program in Physical Therapy at the George Washington University, Physical Therapy Department, Washington, DC
- 1994-2003 Scientific Advisor, Istituto Nazionale a Carattere Scientifico, U.O. di Geriatria Ospedale "I Fraticini," Florence, Italy
- 1989-2003 Expert Consultant, the Federal Trade Commission, Washington, DC
- 2000 Member of the NIH office of education and Pre-IRTA Committee Research Career Panel
- 2000 Member, Research Career Panel, Office of Education, NIH, Bethesda, MD
- 1997 Member, Faculty Promotion Review Panel, Department of Physical Medicine and Rehabilitation, Harvard Medical School, Boston, MA
- 1995-1998 Member (representing the American Society of Biomechanics), organizing committee to establish the Commission for Motion Laboratory Accreditation (CMLA)
- 1993-1995 Member, Faculty Promotion Review Panel, College of Education, University of Kentucky, Lexington, Kentucky
- 1993-1996 Member, National Institutes of Health, Biomedical Engineering and Instrumentation Program, Advisory Panel
- 1989-1995 Consultant, School of Medicine, West Virginia University, Department of Orthopaedic Surgery, Morgantown, WV
- 1994 Member, Faculty Promotion Review Panel, Marquette University, Biomedical Engineering Department, Milwaukee, WI
- 1993 Member, Biomechanics and Movement Science Program Review Board, Office of Graduate Studies, University of Delaware, Newark, DE
- 1991-1993 Honorary Consultant of SARAH - National Institute for Medicine of the Locomotor System, Brasilia, Brazil
- 1990 Consultant, James Whitcomb Riley Hospital for Children Indianapolis, IN

Appointments: Scientific Review

Chairman, Department of Defense, Congressionally Directed Medical Research Programs (CDMRP) grant review panel, 2014 Orthotics and Prosthetics Outcomes Research Program, 2015

Chairman, Department of Defense, Congressionally Directed Medical Research Programs (CDMRP) grant review panel, 2014 Clinical and Rehabilitative Medicine Research Program, 2014

Reviewer, NIH, NICHD, Special Study Section, SBIR/STTR Orthotics RFA, 2013

Reviewer, Department of Defense, CENC-C grant review panel, 2013

Reviewer, The Knowledge Foundation, Swedish research funding agency, 2005-present

- Reviewer, NIH, Clinical Research Center, Scientific Review Panel, 2012
- Reviewer, NIOSH Intramural research proposal reviewer, 2012
- Reviewer, American Institute of Biological Sciences Scientific Peer Advisory & Review Services, 2011
- Member, NIH Study Section MRS MOSS (15), 2006-2011
- Reviewer, National Science Foundation, Engineering Research Centers of Excellence, 2007.
- Member, National Institutes of Health, Rehabilitation Research Review Committee, Department of Rehabilitation Medicine, 1988-2007.
- Grant review panel member, NIH Roadmap Administrative Supplements to Support Interdisciplinary Research in the Behavioral/Social and Biological Sciences, 2005.
- Member, National Institute of Child Health and Human Development, Initial Review Group (Study Section), Medical Rehabilitation Research Subcommittee, 2000-2002.
- Panel member, Rehabilitation Engineering Research Centers Program grant competition, National Institute on Disability and Rehabilitation Research, 2002.
- Panel member, Department of Health and Human Services, National Institutes of Health, Division of Research Grants, Multidisciplinary Special Emphasis Panel, Special Study Section-5-2, 1995-1999.
- Chair, Special Research Emphasis Review Panel, Department of Health and Human Services, National Institutes of Health, National Institute of Child Health and Human Development (NICHD), 1997.
- Reviewer, Japan Society for the Promotion of Science, Fogarty International Center, National Institutes of Health, 1997.
- Committee Member, Rehabilitation Engineering Research Centers (RERCs) program reviews. National Institute on Disability and Rehabilitation Research (NIDRR), 1997.
- In-House Consultant for the Board of Scientific Counselors review, Nursing Department, Warren G. Magnuson Clinical Center, NIH, 1997.
- Grant application reviewer, Albert Einstein Society, Philadelphia, PA. 1997.
- Grant review panel member, The National Science Foundation Biomedical Engineering and Research to Aid persons with Disabilities Program, 1993.

Appointments: Editorial

- Editorial Consultant, *Medicine & Science in Sports & Exercise*, 2012-present.
- Editorial consultant, *Gait & Posture*, 1995-present.
- Editorial consultant, *Journal of Rehabilitation Research and Development*, 1990-present.
- Editorial consultant, *Journal of Biomechanics*, 1998-present.
- Member of the Editorial Board, *Gait & Posture*, 1995-2005.
- Invited Editorial consultant, *Clinical Neurophysiology*, 2001.
- Press project reviewer, The Institute of Electrical and Electronics Engineers (IEEE), Piscataway, NJ, 1994.

- Invited Editorial consultant, Journal of Gerontology: Medical Sciences, 1992.

Appointments - Academic

- 1998-2010 Adjunct Associate Professor in the Department of Biomedical Engineering at the Catholic University of America, Washington, DC
- 1998-2007 Adjunct member of the Graduate Faculty of the University of Maryland Graduate School, Baltimore, MD
- 1998-2007 Mentor: Whitaker Biomedical Engineering Summer Internship Program
- 1999-2004 Adjunct Professor of Health Care Sciences, the George Washington University, Washington, DC
- 2004 Member, Doctoral Review Board, the Catholic University of America, Department of Biomedical Engineering
- 1994-1998 Guest lecturer, University of Maryland Medical School, Baltimore, MD
- 1991-1998 Guest lecturer, Catholic University of America, Department of Biomedical Engineering, Washington, DC
- 1991-1997 Scientific preceptor, NIAMS post-doctoral Fellows, NIH, Bethesda, MD
- 2002 Member, Doctoral Review Board, Drexel University, Department of Biomedical Engineering, Philadelphia, PA
- 1997 Member, Doctoral Review Board, The George Washington University, Department of Electrical Engineering and Computer Science, Washington, DC
- 1996-1998 Member, Doctoral Review Board, Department of Biomechanics and Movement Science, University of Delaware, Newark, DE
- 1993-1994 Scientific preceptor, Rehabilitation Medicine Research Residents of the National Rehabilitation Hospital, Washington, DC

Meetings: Principal Coordinator/Host

- “Biomechanics Priorities Conference” Newark, DE, June 9-11, 2010.
- “Global Health Care Disparity: Managed Care for Patients with Chronic Stroke Conditions” International Summit, San Miniato, Pisa, Italy, November 7-8, 2004.
- Strategic Planning Session on Opportunities for Rehabilitation Research in Chronic Stroke. ISS/NIH Project Planning Workshop. Rome, Italy, 2004.
- “Pediatric and Adult Foot and Ankle: New Horizons in Clinical Treatment and Innovative Technology” a scientific meeting, Bethesda, MD, November 15, 2003.
- “Physical Disabilities Branch Research Retreat”, NIH Bethesda, MD, 2004-2007
- “Rehabilitation Research Seminars”, National Institutes of Health, 2002-2007
- “Clinical Movement Analysis for Rehabilitation Medicine” a one-week training course presented to an international audience (8 countries represented) in Florence, Italy, 2000.

“Movement Analysis Workshop” a grant writing workshop executed for the National Center for Medical Rehabilitation Research (NCMRR), San Diego, CA, 1998.

“Gait Analysis in Rehabilitation Medicine” A consensus building workshop for the National Center for Medical Rehabilitation Research (NCMRR), Arlington, VA, 1996.

“East Coast Clinical Gait Laboratory Conference”, National Institutes of Health, Bethesda, MD, 1987.

Society: Memberships and Activities

Memberships:

2013- Delaware BioScience Association

2013- Amputee Coalition (AC)

2013- American Orthotic Prosthetic Association (AOPA)

2013- American Academy of Orthotists & Prosthetists (AAOP)

1999- Italian Society of Clinical Movement Analysis (SIAMOC) Founding Member

1995- Gait & Clinical Movement Analysis Society (GCMA) Founding Member

1990- International Society of Biomechanics (ISB)

1988- American Society of Biomechanics (ASB)

Activities:

Awards Committee, Annual meeting of the American Society of Biomechanics, 2012.

Member, Scientific Board, Italian Society of Clinical Movement Analysis (SIAMOC), 2009.

Founding Coordinator, Technical Interest Group, Gait & Clinical Movement Analysis Society, 2004.

Elected Member, Board of Directors, Gait & Clinical Movement Analysis (GCMA) Society, 2001-2004, re-elected 2004-2005.

Member-at-large, Board of Directors, the Commission for Motion Laboratory Accreditation (CMLA), 2000-2003.

Chairman of the Nominations Committee, Gait & Clinical Movement Analysis Society, 1998.

Past-President, Gait & Clinical Movement Analysis Society, 1998-1999.

Elected President, Gait & Clinical Movement Analysis Society, 1997-1998.

Elected Vice-President, Commission for Motion Laboratory Accreditation, Inc. 1998.

President-elect, Gait & Clinical Movement Analysis Society, 1996-1997.

Co-chairman, Education Committee, Gait & Clinical Movement Analysis Society, 1996-1997.

Session co-chair, 13th Southern Biomedical Engineering Conference. Washington, DC: Human Movement Analysis: Advanced Techniques in Quantitative Motion Analysis, 1994.

Symposium chair, Seventh World Congress of the International Rehabilitation Med. Assoc., Washington, DC: Biomechanics in Rehabilitation: Getting in Step with Gait Analysis, 1994.

Session chair, Eighth Annual East Coast Clinical Gait Laboratory Conference, Rochester, MI: Modeling, 1993.

Member, East Coast Clinical Gait Laboratory Conference Steering Committee, 1989-1990.

Session chair, East Coast Clinical Gait Laboratory Conference, East Lansing, MI: EMG and Other Functional Evaluations, 1990.

Session chair, East Coast Clinical Gait Laboratory Conference, Bear Mountain, NY: Kinematics and Kinetics, 1989.

Session chair, IEEE Engineering in Medicine and Biology Society, New Orleans, LA: Computer Aided Engineering Applications in Biomechanics, 1988.

INVENTION REPORTS, PATENTS AND COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS

Co-Inventor, UD Invention Report, Title: Image Based Measurement System for Customizing a Rehabilitation Device, 2014.

Co-inventor, U.S. Patent Number (8,538,570), Title: Process of Manufacture of Customized Ankle Foot Orthosis by Selective Laser Sintering, 2013.

Author of the NIH Biomechanical analysis programs EVENTS and GTD. In 1998, these programs were in use through official material transfer agreements at over 48 research and clinical facilities around the world. The routines began an ongoing process of technology transfer to C-Motion, Inc. in 1998 with continued funded enhancements to present.

Inventor, U.S. Patent Number (07/737,872), Title: System and Method for Performing Simultaneous Bilateral Measurements on a Subject in Motion, 1993.

Authored, First Cooperative Research and Development Agreement (CRADA): for the Warren Grant Magnuson Clinical Center, titled: Biomechanical Instrumentation Development, 1990.

HONORS AND AWARDS

2012 First Place Award for Mobiletech Orthopaedics business plan proposal: University of Delaware Hen Hatch, UD's premier business startup funding competition (Role: Faculty Advisor).

2012 University of Delaware – Inventors, Recognition Award.

2009 University of Delaware – Inventors, Recognition Award.

2009 The Catholic University of America – Certificate of Appreciation for ten years of service on the Department of Biomedical Engineering Advisory Board.

2008 Reviewer Recognition, NIH, Center for Scientific Review, Special Emphasis Panel, ZRG1 MOSS-F 15 B, Musculoskeletal Rehabilitation.

- 2008 Appointed to the Delaware Institute for Medical Education and Research (DIMER) Board of Directors.
- 2005 Josef Hoog Award presented by the Therapist Category of the US Public Health Service in recognition of outstanding clinical research. "Using Induced Accelerations to Understand Knee Stability During Gait of Individuals with Muscle Weakness" Siegel KL, Kepple TM, and Stanhope SJ (authors).
- 2004 Sole recipient in the category of Science, the National Institutes of Health Clinical Center Director's Award for 2004.
- 2004 Istituto Scientifico Italiano Colonna Vertebrale (ISICO). Annual award for best paper related to rehabilitation research in patients with disabilities of vertebral origin.
- 2002 Certificate of Appreciation from the Director, National Institute of Child Health and Human Development for serving as a member of the Medical Rehabilitation Research Subcommittee, NICHD.
- 2001 Awarded "Best Paper of the Year - 2000" Gait and Clinical Movement Analysis Society.
- 2000 Warren G. Magnuson Clinical Center "On-the-Spot" Award in recognition for providing computer support to the Rehabilitation Medicine Department during a time of need and transition.
- 2000 President's Council on year 2000 Conversion – Citation, for important contributions towards the minimization of potential problems associated with the Year 2000 date change.
- 1998 Special Act Award from the National Institutes of Health for development of a proposal for a Functional Movement Analysis Center.
- 1998 Presidential Award, for Exceptional Leadership, Service and Dedication from the Gait and Clinical Movement Analysis Society.
- 1998 Citation of Merit for outstanding volunteer service from the Superintendent of Montgomery County Public Schools, Montgomery County, MD.
- 1997 Certificate of Appreciation for assistance with activities of the Therapist Professional Advisory Committee, U.S. Public Health Service.
- 1997 Special Act Award from the NIH for the development and execution of a National Conference on Gait Analysis in Rehabilitation Medicine.
- 1997 Quality of Work Life Award, National Institutes of Health.
- 1993 Senior Scientific Staff Appointment, National Institute of Arthritis and Musculoskeletal and Skin Diseases.
- 1992 Special Act Award from the Director, Warren Grant Magnuson Clinical Center, for developing the first NIH Clinical Center Cooperative Research and Development Agreement (CRADA).
- 1988 Granted Tenure, Senior Staff Scientist status (June 20, 1988), by Sub-panel IV Committee on Promotions, Henry Masur, M.D., Chairman, National Institutes of Health.
- 1986 NIH Employee Cash Award for sustained high level of effort.

1984 Admitted to Phi Alpha Epsilon (Honorary Academic Society) University of Maryland.

GRANTS/FUNDNG SOURCES – active (Note: \$43 M in active awards)

UNIDEL13H-ORTH REHAB PROG DEV Stanhope (PI) 01/14/2014-06/30/2016
UD/UNIDEL

Orthopedic Rehabilitation Program Development

The purpose of the University of Delaware Funded two year award is to years to advance the University's orthopedic rehabilitation research capabilities. The University's long-term goal is to establish a world-renowned program for prosthetic and orthotics research, patient care and education on the Science, Technology and Advanced Research (STAR) campus.

Role: Principal Investigator \$400,000

W81XWH-11-2-0222 Stanhope (PI) 10/1/2011-9/30/2016

Department of Defense (CDMRP) The BADER Consortium

The overarching goal of the BADER Consortium is to establish evidence-based orthopaedic rehabilitation care across four DOD medical treatment facilities that results in optimal functional outcomes for each wounded warrior.

Role: Principal Investigator \$19.7 Million

DARPA-11-54-OM-FP-25 Gillespie (PI) 07/01/2012-06/30/2015

Department of Defense

Rapid Prototyping of Advanced Passive Dynamic Ankle-Foot Orthoses Designs for Wounded Warriors

The goal of the proposed technology development effort is to develop rapid automated manufacturing technologies for composite passive dynamic-foot orthoses (PD-AFOs) that can demonstrate order of magnitude reductions in cycle time, while improving performance characteristics, individual customizability and affordability.

Role: Co-Investigator \$3 Million

P20GM103446 Stanhope (PI) 08/01/2014-04/31/2019

National Institutes of Health

Delaware IDeA Networks of Biomedical Research Excellence

The major goal of the five year Delaware INBRE (renewal) is to continue to create and enhance an inter-institutional biomedical research capability, by developing a statewide research infrastructure across six Delaware Institutions.

Role: Principal Investigator \$18,176,400

State of Delaware Stanhope 08/01/2014-04/31/2019

The major goal of the Delaware State supplement award is to further enhance the impact and institutionalization of the NIH funded five year Delaware INBRE program.

Role: Principal Investigator \$5,000,000

UNIDEL13H Stanhope 01/14/2014-06/30/2016
UD/UNIDEL

Orthopedic Rehabilitation Program Development

The major goals of this University of Delaware Funded two year award is to advance the University's orthopedic rehabilitation research capabilities. The University's long-term goal is to establish a world-renowned program for prosthetic and orthotics research, patient care and education on the Science, Technology and Advanced Research (STAR) campus.

\$400,000

DoD (CDMRP) Stanhope (site PI) 10/01/2014-09/30/2017

The PROFIT Study: Prosthetic Fit Assessment in Traumatic Trans-tibial Amputees.

The BADER Consortium will play a role development of the conceptual design of the ProFit Instrument and development of the study protocol as it pertains to the implementation of the high tech (Smart Pyramid) assessment.

Role: Site Principal Investigator \$137,044

DoD (CDMRP) Stanhope (site PI) 10/01/2014-09/30/2017

A pilot study to test the efficacy of psychologically based physical therapy training for treating deployed US Sailors and Marines with musculoskeletal injuries.

Research has shown that addressing modifiable psychological risk factors early in an MSI episode results in better outcomes. This proposal seeks to train physical therapy staff aboard a carrier in psychologically-based physical therapy (PBPT) so that these factors may be addressed at the start of treatment. Stanhope effort as site PI is oversight of subcontract from NYU.

Role: Site Principal Investigator \$219,840

GRANTS/FUNDNG SOURCES (Senior Co-investigator Status) – completed

UDRF Strategic Initiative Award Fang (PI) 12/01/2010-06/30/2012

An Early Warning System for Unrecognized Drug Side Effects Discovery.

Role: Co-PI \$45,000.

1R13HD063283-01 Davis (PI) 07/01/2010-06/30/2011

NIH/NICHD

Biomechanics in Movement Science: Building Trans-domain Bridges to Translational Research.

The purpose of this proposed meeting is to develop and prioritize a set of recommendations pertaining to biomechanics and movement science research that is trans-domain and translational in nature.

Role: Co-Coordinator \$9,000.

Interagency Agreement Stanhope (PI) 2004-2008

National Institute on Disability and Rehabilitation Research (NIDRR) Interagency Disability and Rehabilitation Research Initiative (DRRI) Project. The goal of this project was to develop and test a direct ultrasound gait recording system.

Role: PI \$75,000.

DOD Stanhope (PI) 2004-2007
The National Rehabilitation Hospital Assistive Technology Research Center.
The goal of this project was to develop and test a novel method for the manufacture and testing of custom dynamic ankle-foot orthoses.
Role: PI \$842,426. (awarded: not funded).

SBIR Selbie (PI) 2004-2007
National Institutes of Health, Phase II award
The purpose of this effort was to implement induced acceleration analyses in Visual-3D software.
Role: No-cost collaborator \$776,511.

Intra-Agency Agreement Stanhope (PI) 2002-2007
NIH, National Institute of Child Health and Human Development
The goal of this ongoing effort was for the establishment and continued support of an intramural medical rehabilitation research initiative titled the Physical Disabilities Branch.”
Role: PI \$7,200,000.

Career Award Sheehan (PI) 2002-2006
National Science Foundation
The purpose of this effort was the development and testing of an MRI-based dynamic imaging methodology titled Virtual Functional Anatomy.
Role: Investigator \$375,000.

SBIR Selbie (PI) 2002-2003
National Institutes of Health, Phase I award
The purpose of this effort was to implement induced acceleration analyses in Visual-3D software.
Role: No-cost Collaborator \$100,000.

SBIR Selbie (PI) 2002-2003
National Institutes of Health, Phase I award
The purpose of this effort was to develop and implement a means of performing inverse dynamics analyses using instrumented assistive technologies.
Role: No-cost Collaborator \$100,000.

STTR Selbie (PI) 1999-2002
National Institutes of Health, Phase II award
The purpose of this effort was to conduct technical enhancements and technology transfer of Move-3D software to C-Motion, Inc. Role: No-cost Collaborator \$500,000.

STTR Selbie (PI) 1998
National Institutes of Health, Phase I award
The purpose of this effort was to demonstrate the feasibility for producing technical enhancements and technology transfer of Move-3D software to C-Motion, Inc.
Role: No-cost Collaborator \$100,000.

GRANTS/FUNDNG SOURCES (Select: Senior Co-investigator Status) – not funded

RERC-2010 Rahman (PI) Not Funded \$7.5M NIDRR
This proposed effort would establish a Pediatric Orthopedic Rehabilitation Engineering Research Center of excellence by linking AI DuPont Hospital for Children with the University of Delaware's Department of Mechanical Engineering, Biomechanics and Movement Science Interdisciplinary Graduate Program, and the Department of Kinesiology and Applied Physiology.
Role: Co-investigator

PRORP-2009 Stanhope (PI) Not Funded \$200,000
DOD
Tuned Prosthetic Ankle-Foot Dynamics Will Enhance Gait Function
The purpose of this hypothesis development award is to explore a new and novel approach for the rapid manufacture of fully-customized and stiffness-tuned prosthetic ankle-foot components.

RC4-2009 Stanhope (PI) Not Funded \$1,000,000
NIH/NIA
The Delaware Community Research Network (DeCRN)
The goal of this effort is to dramatically transform the level of community awareness, access, training and engagement in health sciences research throughout the Delaware Health Sciences Alliance and across the State of Delaware's Aging Community.

MANUSCRIPTS – submitted

Arch ES, **Stanhope SJ**, Higginson JS. Passive-Dynamic Ankle-Foot Orthosis Bending Stiffness Replicates Soleus but not Gastrocnemius Muscle Function During Stance in Gait: Insights for Orthosis Prescription. *Prosthetics Orthotics International*.

Alderink, GJ, Kepple T, Siegel KL, Razzook A, **Stanhope SJ**. The Lower Extremities and Torso Make Little Contribution to Ball Velocity in a Pitched Baseball. *J of Applied Biomechanics*.

Stuart M, Papini D, Benvenuti F, Nerattini M, Roccatto E, Macellari V, **Stanhope S**, Macko R, Weinrich M. Chronic Stroke as a Measure of Health Equity: A Comparison of Two Italian Health Authorities. *International Journal for Equity in Health*.

Takahashi KZ, Kepple TM, **Stanhope SJ**. Comparison of Biomechanical Models to Quantify Total Power Profiles of Prosthetic Lower Limbs: A Case Study Evaluating a Shock-Absorbing Prosthesis. *Journal of Biomechanics*.

MANUSCRIPTS – in press

Takahashi KZ, Horne J, **Stanhope SJ**. Comparison of Mechanical Energy Profiles of Passive and Active Prostheses: A Case Study. *Prosthetics Orthotics International*, PMID: 24418933

Arch ES and **Stanhope SJ**. Passive-dynamic ankle-foot orthoses substitute for ankle strength while causing adaptive gait strategies: a feasibility study. *Annals of Biomedical Engineering*, 2014. [Epub ahead of print].

MANUSCRIPTS – published

- Takahashi KZ, **Stanhope SJ**. Mechanical Energy Profiles of the Combined Ankle-Foot System in Normal Gait: Insights for Prosthetic Designs. *Gait & Posture*, 2013; S0966-6362(13):191-4. PMID: 23628408
- Schrank ES, Hitch L, Wallace K, Moore R, **Stanhope SJ**. Assessment of a virtual functional prototyping process for the rapid manufacture of passive-dynamic ankle-foot orthoses. *J Biomech Eng*. 2013;135(10):101011-7. PMID: 23774786
- Goldberg SR, **Stanhope SJ**. Sensitivity of joint moments to changes in walking speed and body-weight-support are interdependent and vary across joints. *Journal of Biomechanics* 2013;46(6):1176-1183. PMID: 23374276
- Wu H, Fang H, **Stanhope SJ**. Exploiting online discussions to discover unrecognized drug side effects. *Methods Inf Med*. 2013;52(2):152-9. PMID: 23450374
- Wu H, Fang H, **Stanhope SJ**. An early warning system for unrecognized drug side effects discovery. *Proceedings: 2012 World Wide Web Conference, Lyon, France*.
- Takahashi KZ, Kepple TM, **Stanhope SJ**. A unified deformable (UD) segment model for quantifying total power of anatomical and prosthetic below-knee structures during stance in gait. *Journal of Biomechanics* 2012;45:2662-2667. PMID:22939292
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PODIUM PRESENTATIONS - Invited /Scientific

- 2015 The Bridging Advanced Developments for Exceptional Rehabilitation (BADER) Consortium: Reaching for Optimal Orthopaedic Rehabilitation Outcomes, Extremity of War Injury Meeting. Washington, D.C.
- 2014 Defense Health Board Briefing – The BADER Consortium, Alexandria, VA
- 2014 The Future of 3-D Printing in Orthotics and Prosthetics: A Glimpse into the Future. 20th Annual Continuing Education Seminar of the New Jersey American Academy of Orthotists and Prosthetists. Atlantic City, NJ (Invited Symposium Presentation)
- 2014 Making Collaborations Successful: Lessons from Tuscany and Beyond. Think Globally – Act Locally Symposium. University of Maryland at Baltimore, Baltimore, MD (Invited Symposium Presentation)
- 2014 3D Gait Analysis to Design and Manufacture Custom AFOs. Annual meeting of the American Academy of Orthotists and Prosthetists. Chicago, IL (Invited Symposium Presentation)
- 2014 A Framework for the Rapid Manufacture of Personalized Rehabilitation Devices. Annual meeting of the American Academy of Orthotists and Prosthetists. Chicago, IL (Invited Symposium Presentation)
- 2014 Building Successful Collaborations — Lessons from Tuscany and Beyond. University of Maryland Baltimore, Baltimore, MD (Invited Symposium Presentation)
- 2013 Walking Through Time. Temple University, Philadelphia, PA (Invited Symposium)
- 2013 Rapid Manufacture of Personalized Rehabilitation Devices for Optimal Function. Johns Hopkins University, Baltimore, MD. (PM&R Grand Rounds)
- 2012 One Health One World Symposium, “From Good to Grant”, Newark, DE (Invited Presentation)
- 2012 U.S. Army Research, Development and Engineering Command (RDECOM), Technical briefing to the RDECOM Director and staff (Invited Presentation)
- 2012 Rapid Manufacture of Personalized Rehabilitation Devices for Wounded Warriors. Center for Composite Materials (CCM) research day, Newark, DE (Invited Keynote Presentation)
- 2012 Passive Dynamic Ankle-Foot Orthoses: The Rapid Manufacture of Personalized Rehabilitation Devices (RAMPeRD) Initiative. TATRC LEGS technical working group meeting, Frederick, MD. (Invited Presentation)
- 2012 Military Orthopaedic Rehabilitation Research Initiatives: BADER Consortium, Extremity War Injuries VII: A Decade at War: Evolution of Orthopaedic Combat Casualty Care, Washington, DC (Invited Presentation)
- 2011 Overview: BADER Consortium (Structure, Function & Timeline), Advanced Technology Applications for Combat Casualty Care meeting, (Invited Presentation)
- 2011 The BADER Consortium. Extremity War Injuries VII, Washington, DC (Invited Presentation)

- 2011 Orthopaedic Rehabilitation Research Initiatives. University of Maryland, College Park. (Invited Presentation)
- 2011 Consensus Lecture: Balancing Priorities. Gait and Clinical Movement Analysis Society, Bethesda, MD (Invited Presentation)
- 2011 Research Priorities for AFA Implementation. Istituto Superiore di Sanita, Rome Italy (Invited Presentation)
- 2010 Rapid Manufacture of Personalized Rehabilitation Devices, Department of Defense Briefing, Aberdeen, MD (Invited Presentation)
- 2010 Department of Defense Briefing, Aberdeen, MD. Rapid Manufacture of Personalized Rehabilitation Devices (RaMPeRD). (Invited Presentation)
- 2010 Biomechanics and Movement Science Research Seminar, Newark, DE. To Roll or Resist: Replicating Ankle and Foot Function During Stance in Gait. (Invited Presentation)
- 2010 National Institutes of Health, INBRE PI-PC meeting, Bethesda, MD. Community-Based Adaptive Physical Activity Programs: the Delaware and Italy Chronic Care Connection. (Invited Presentation)
- 2009 Delaware Health Sciences Alliance 2009 Symposium, Newark, DE. Rehabilitation Sciences (Invited Panelist)
- 2009 Italian Society of Clinical Movement Analysis, Sardinia, Italy. Clinical Applications of Movement Analysis in Rehabilitation Medicine. (Invited pre-conference clinical seminar)
- 2009 Italian Society of Clinical Movement Analysis, Sardinia, Italy. Decennial Lecture: Ten years of Movement Analysis in Italy and in the World. (Keynote Presentation)
- 2008 Mechanical Engineering Department Seminar, Pennsylvania State University, University Park, PA. Virtual prototype Custom Passive Dynamic Orthoses: One Small Step for Man... (Invited Presentation)
- 2008 Technical Symposium, Gait and Clinical Movement Analysis Society, Richmond, VA, Customization of Passive Dynamic Orthoses: A Step-by-Step Approach. (Invited Presentation)
- 2007 Musculoskeletal Disorders Program, National Institute for Occupational Safety, Morgantown, WVA, Notes from a Trip with the NIH "Roadmap." (Invited Presentation)
- 2007 Civilian American and European Surface Anthropometry Resource (CAESAR) project workshop, Wright Patterson Air Force Base, Ohio, Human Movement Analysis: Motion Survey. (Invited Presentation)
- 2007 The 12th World Congress of the International Society for Prosthetics and Orthotics, Vancouver, Canada, Contribution of Dynamic Ankle Foot Orthoses to Ankle Moments During Stance in Gait.
- 2007 North East American Society of Biomechanics Conference, College Park, MD. A Passive Dynamic Ankle-Foot Orthoses Approach to Enhanced Gait Function. (Keynote Presentation)

- 2007 Center for Biomechanical Engineering Research, University of Delaware, Newark, DE. A Passive Dynamic Ankle-Foot Orthoses Approach to Enhanced Gait Function. (Keynote Presentation)
- 2007 American Academy of Orthotists and Prosthetists, San Francisco, CA. Selection and Evaluation of Passive Dynamic Ankle-Foot Orthosis Characteristics: A Novel Research Approach.
- 2006 Clinical Research Center: Brown Bag Luncheon, NIH, Bethesda, MD. Towards the Optimal Prescription of Dynamic Joint Braces.
- 2006 Italian Clinical Movement Analysis Society (SIAMOC), Empoli, Italy. A Passive Dynamic Ankle-Foot Orthosis Approach to Enhanced Gait Function (Keynote Presentation)
- 2006 The American Physical therapy Association (APTA) Annual Conference – “Cutting Edge” Rehabilitation Research Forum, Orlando, FL. A “Walk” Down the Path of Discovery. (Invited Presentation)
- 2006 Grand Rounds, Department of Orthopaedic Surgery, Medical College of Wisconsin – “Exploring the Biomechanics Underlying Passive Dynamic Ankle-Foot Orthosis Use”
- 2006 Grand Rounds, Department of Orthopaedic Surgery, Medical College of Wisconsin – “The Role of Movement Analysis in Rehabilitation and Related Research”
- 2006 ISS/NIH Collaboration Program 2006 Meeting, Rome, Italy. Collaboration in medical Rehabilitation: Past Accomplishments and Future Opportunities. (Invited Presentation)
- 2006 National Center for Medical Rehabilitation Research: Musculoskeletal Research Conference, Bethesda, MD. Promising Scientific Areas & Emerging Technologies. (Invited Presentation)
- 2005 Symposium: Human Movement Science, the Italian Experience, the Embassy of Italy in the United States, Washington, DC. Intramural Research of Health Institutes: NIH Experience. (Invited Presentation)
- 2005 Grand Rounds of the Warren Grant Magnuson Clinical Center, National Institutes of Health, Bethesda, USA. That “Spring” in your step: Dynamic Joint Bracing for Enhanced Function. (Invited Presentation)
- 2005 Applied Human Biology Division, Uniform Services University of the Health Sciences, Bethesda, USA. Human Movement Analysis in a Rehabilitation Context. (Invited Presentation)
- 2005 Gerontology Forum: University of Maryland Baltimore, Baltimore, USA. From Bench to Bedside: Building an International Geriatric Research Program. (Invited Presentation)
- 2004 Medicine for the Public: 2004 lecture Series. National Institutes of Health, Bethesda, USA. The Biomechanics of Human Movement: Could Leonardo da Vinci Fly? (Invited Presentation)
- 2004 Strategic Planning Session on Opportunities for Rehabilitation Research in Chronic

- Stroke. ISS/NIH Project Planning Workshop, Rome, Italy. Functional Limitation and Movement Strategy Assessment. (Invited Presentation)
- 2004 International Society of Prosthetics and Orthotics (ISPO), Hong Kong. Gait Analysis: Clinical Applications in Orthotics and Prosthetics. (Invited Presentation)
- 2004 University of Maryland, Rehabilitation Sciences Seminar Series, Baltimore, Maryland. Human Movement Analysis in a Rehabilitation Context. (Invited Presentation)
- 2003 NIH Trainee Workshop sponsored by the National Center for Medical Rehabilitation Research (NCMRR), Silver Spring, Maryland. Picture This: Hot New Measurement and Modeling Methods in Movement Disorders Research. (Invited Presentation)
- 2003 Center for International Rehabilitation Research Information and Exchange (CIRRIE) sponsored forum titled: "International Collaborative Research in Rehabilitation" Washington, D.C. Italy/USA Rehabilitation Research: Case Study. (Invited Presentation)
- 2003 The International Meeting on Upper Motor Neuron Syndrome: Spasticity and Related Movement Disorders, Lecco, Italy. Functional Movement Analysis: Strengths and Weaknesses. (Invited Presentation)
- 2003 Rehabilitation Rounds, National Rehabilitation Hospital, Washington, DC, USA. Clinical Movement Analysis for Rehabilitation Medicine. (Invited Presentation)
- 2002 American Academy of Physical Medicine and Rehabilitation (AAPM&R), Orlando, USA. Emerging Methods in Movement Analysis for Rehabilitation Medicine. (Invited Presentation)
- 2002 Italian Clinical Movement Analysis Society (SIAMOC), Bologna, Italy. Technical and Methodological Issues in Clinical Gait Analysis. (Invited Presentation)
- 2002 BioNet Event on "Strategic Development of European Networks in Biomechanics", Brussels, Belgium. Advanced Methods in Computer Based Movement Analysis in Education and Clinical Practice. (Invited Presentation)
- 2002 BioNet Event on "Strategic Development of European Networks in Biomechanics", Brussels, Belgium. An American Perspective. (Invited Presentation)
- 2001 Building Rehabilitation Research Capacity, NIH sponsored conference, Bethesda, USA. A trans-Rehabilitation-Research-Domain (TRRD) Model for Physical Disabilities Research (Invited Presentation).
- 2001 American Society of Neurorehabilitation, Philadelphia, USA. Computer Models in Gait and Posture. (Invited Presentation)
- 2000 Clinical Movement Analysis in Rehabilitation Medicine Meeting, Florence, Italy. Movement Measurement and System Testing Techniques. (Invited Presentation)
- 2000 A Proposed New Event and Range Section for the C3D Data File. Annual meeting of the Gait and Clinical Movement Analysis Society, Rochester, USA.
- 1999 Advisory Board Meeting of the National Center for Medical Rehabilitation Research, Rockville, USA. A Research Model for Understanding the Relationship Between Impairments, Functional Limitations, and Physical Disability. (Invited Presentation)

- 1999 Founding meeting of the Italian Clinical Movement Analysis Society, Rome, Italy. Clinical Movement Analysis in the 21st Century. (Keynote Address)
- 1999 Ergonomic Barriers to Rehabilitation and Employment: A Symposium on Models and Methods, Ann Arbor, USA. A Research Model for Understanding the Relationship between Impairments, Functional Limitations, and Physical Disability. (Invited Presentation)
- 1999 Annual meeting of the Gait and Clinical Movement Analysis Society, Dallas, USA. Balance Control During Quiet Standing: Modifications with Aging.
- 1997 Workshop on Human Motion Analysis: Technical Advances and Clinical Applications, Chicago, USA. Does Clinical Gait Analysis Meet the Patient Care Needs of Rehabilitation Specialists? (Keynote Address)
- 1997 Televised Broadcast, Grand Rounds (Centernet) of the Warren Grant Magnuson Clinical Center, National Institutes of Health, Bethesda, USA. Looking Into the Future: The role of Neural Prediction in Maintaining Upright Posture.
- 1996 Annual meeting of the North American Society of Gait and Clinical Movement Analysis, Birmingham, USA. When A Push Becomes a Shove: The dynamic Limits of Standing Balance. (Keynote Address)
- 1996 Annual meeting of the North American Society of Gait and Clinical Movement Analysis, Birmingham, USA. Dynamic Limits of the Ankle Strategy During Standing Balance.
- 1995 Guest Lecturer, West Virginia University, Department of Orthopedics, Morgantown, USA. Functional Movement Analysis as a Surgical Outcomes Indicator.
- 1995 Grand Rounds, National Institutes of Health, Warren Grant Magnuson Clinical Center, Bethesda, USA. The Vesalius Project: A Window into the Synergy of Human Motion.
- 1995 Mayo Clinic, Rochester, USA, The Vesalius Project. (Invited Presentation)
- 1995 Mayo Clinic, Rochester, USA, Clinical Applications of Functional Movement Analysis. (Invited Presentation)
- 1995 Panel member, Behavioral Adaptation to the Use of Assistive Technology: Enhancing Human Movement in the 21st Century for People with Disabilities. Baltimore, MD, Change in Functional Status (Outcome Issues)
- 1995 Istituto Nazionale a Carattere Scientifico, Florence, Italy, The Dynamic Limits of Standing Balance: The Fortune Teller Within us All. (Invited Presentation)
- 1995 2nd Annual North American Clinical Gait Laboratory Conference, Waterloo, Ontario, Canada, The Quality Assurance Program at the National Institutes of Health Biomechanics Laboratory.
- 1994 Annual Meeting of the American Society of Biomechanics, Columbus, USA, A Comparison of Knee Kinetics from Surface-Mounted and Bone-Mounted Targets During Gait.
- 1994 Annual Norwegian Sports Medicine Conference, Lillehammer, Norway, The Practical Application of Biomechanics in Sports Medicine (Keynote address).

- 1994 Second World Congress of Biomechanics, Amsterdam, the Netherlands, In Vivo Measurements of Human Skeletal Motion. (Invited Presentation)
- 1994 Contributions of Biomedical Engineering to Biology and Medicine, National Institutes of Health, Bethesda, USA, An Overview of Activities in the Warren Grant Magnuson Clinical Center Biomechanics Laboratory.
- 1994 National Rehabilitation Hospital, Washington, DC, USA. Where Biomechanics and Outcome Measures Meet. (Grand Rounds)
- 1994 North American Clinical Gait Analysis Conference, Portland, USA, Effect of Target Attachment Techniques on Estimates of Shank Skeletal Motion.
- 1994 North American Clinical Gait Analysis Conference, Portland, USA, A Procedure for Evaluating Gait Analysis System Performance.
- 1994 13th Southern Biomedical Engineering Conference, Washington, DC, USA. On the Magnitude of Angular Kinematic Inaccuracies in Gait Analysis.
- 1994 VICON users group meeting, North American Clinical Gait Analysis Conference, Portland, USA. Recent Developments at the National Institutes of Health Biomechanics Laboratory. (Invited presentation)
- 1993 Catholic University of America, Department of Biomedical Engineering, Washington, DC, USA. The Role of Functional Movement Analysis in Rehabilitation Medicine.
- 1993 National Naval Medical Center, Department of Orthopaedic Surgery, Bethesda, USA, A series of lectures on functional movement analysis.
- 1992 Frontiers in Rehabilitation Medicine: Osteogenesis Imperfecta, Bethesda, USA, Recent advancements in Motion Analysis.
- 1991 10th Annual Scientific Meeting of the American Pain Society, New Orleans, USA. Pain Due to Biomechanical Abnormalities. (Invited Symposium Presentation)
- 1991 Seventh Annual East Coast Clinical Gait Laboratory Conference, Richmond, USA. Dilemma of Standardization.
- 1991 Seventh Annual East Coast Clinical Gait Laboratory Conference, Richmond, USA. Nonequilibrium in the Translational Equations of Motion.
- 1991 Orthopedic Guild Symposium, Bethesda, USA, Biomechanics of a Limb Spared Patient.
- 1991 International Symposium on 3-D Analysis of Human Movement, Montreal, Quebec, Canada. Towards Standardization. (Invited Member of the Round Table)
- 1991 NIH Rehabilitation Medicine Seminar, Bethesda, USA. Introduction to Total Quality Management (TQM).
- 1990 Sixth Annual East Coast Clinical Gait Laboratory Conference, East Lansing, MI, A Variable Intensity Strobe Technique for Use in Clinical Biomechanics.
- 1990 Holy Cross Hospital, Silver Spring, MD, Advanced Musculoskeletal Mechanics for the Physical Therapist: Towards Understanding the Rectus Abdominis Paradox.
- 1988 Fourth Annual East Coast Clinical Gait Laboratory Conference, University Park, PA,

- (Keynote Lecture) Problems and Solutions with Kinematic and Kinetic Approaches to Gait Analysis.
- 1988 IEEE Engineering in Medicine and Biology Society, New Orleans, LA, (Invited Presentation) A Position Adjustable Force Plate Mounting System.
- 1988 Department of Rehabilitation Medicine, National Institutes of Health, Bethesda, MD, (Research Seminar) Knee Joint Control Mechanisms in the Limb Sparing Patient.
- 1987 International Society of Electrophysiological Kinesiology (ISEK), Baltimore, MD, (Invited Presentation) Anterior Abdominal Wall Mechanics.
- 1986 Physical Therapy Association Regional Conference, Rockville, MD, (Invited Presentation) Abdominal Muscle Mechanics.
- 1986 ISBS Conference, Halifax, Nova Scotia, Interactions Between the Anterior Abdominal Wall Musculature.
- 1985 East Coast Clinical Gait Laboratory Conference, Newington, CT, An Automated Biomechanics Laboratory.
- 1984 North Carolina AAHPER, Chapel Hill, NC, The Use of an Incline Board for Sit-Up Exercises.
- 1983 NASA Engineering Colloquium (Invited Presentation) Greenbelt, MD. Running shoe wear and Impact Force.
- 1982 Maryland AAHPER, Towson, MD, A Cinematographical Analysis of Walking.

POSTER PRESENTATIONS – representative examples

- Feeney D, Kaminski T, Stanhope SJ, Machi A, Jaric S, Mechanics of loaded vertical jumping: f-v and p-v relationships. UD, CEBER Research Symposium May, 2015.
- Razzook A, Roberts D, Rose B, Edwards D, **Stanhope SJ**. Characterizing treadmill performance to support an enhanced ergometry protocol. UD, CEBER Research Symposium May, 2015
- Pollen T, Arch ES, **Stanhope SJ**. A kinematic and energetics model of shank progression during stance. UD, CEBER Research Symposium May 2015.
- Ebrahimi A, Knarr B, **Stanhope SJ**, Higginson JS. Preliminary study of plantar flexor muscle movements during body weight supported walking. UD, CEBER Research Symposium May, 2015.
- Guinn LD, Schrank ES, **Stanhope SJ**. Heel rise occurs earlier in stance with increased walking velocity. Center for Biomedical Engineering Research Symposium, May 2013, Newark, DE
- Takahashi K, **Stanhope S**. Net efficiency of the combined ankle-foot system in normal gait: insights for passive and active prosthetics. (Proceedings) Annual meeting of the American Society of Biomechanics, 2012.
- Razzook A, Gleason C, Willy R, Fellin R, Davis I, **Stanhope S**. Average ankle dynamic joint stiffness during heel strike running. (Proceedings) Annual meeting of the American Society of Biomechanics, 2012.

- Razzook AR, Takahashi KZ, Guinn LD, Schrank ES, **Stanhope SJ**. A predictive model for natural ankle stiffness during walking: Implications for ankle foot orthosis prescription. (Proceedings) Center for Biomedical Engineering Research Symposium, University of Delaware, 2011.
- Schrank ES, Higginson JS, **Stanhope SJ**. Compensatory ankle control strategies when walking with a customized PD-AFO. (Proceedings) Center for Biomedical Engineering Research Symposium, University of Delaware, 2011.
- Takahashi KZ, Razzook AR, Guinn LD, Schrank ES, Kepple TM, **Stanhope SJ**. A unified deformable segment model for measuring combined shank-foot power. (Proceedings) Center for Biomedical Engineering Research Symposium, University of Delaware, 2011.
- Takahashi KZ, Razzook AR, Guinn LD, Schrank ES, **Stanhope SJ**. Roll-over shape dynamics during stance in natural gait. (Proceedings) American Society of Biomechanics, 2010.
- Guinn LD, Takahashi KZ, Razzook AR, Schrank ES, **Stanhope SJ**. Natural ankle pseudo-stiffness during gait initiation. (Proceedings) American Society of Biomechanics, 2010.
- Guinn LD, Takahashi KZ, Razzook AR, **Stanhope SJ**. Natural ankle pseudo-stiffness during gait initiation. (Proceedings) Center for Biomedical Engineering Research Symposium, University of Delaware, 2010.
- Schrank ES, Takahashi K, Razzook AR, Guinn LD, **Stanhope SJ**. Can heel rocker dynamics during stance in gait be driven via shank kinematics? (Proceedings) 2nd Congress of the International Foot and Ankle Biomechanics Community, 2010.
- Schrank ES, Takahashi K, Razzook AR, Guinn LD, **Stanhope SJ**. Feasibility of driving heel rocker dynamics with shank kinematics. (Proceedings) Center for Biomedical Engineering Research Symposium, University of Delaware, 2010.
- Putman L and **Stanhope SJ**. A rock and roll model: Using biomechanics to recreate ankle function. Undergraduate Research Symposium, University of Delaware, 2010.
- Schrank ES and **Stanhope SJ**. Dimensional accuracy of an automated ankle foot orthosis fit and manufacturing process. (Proceedings) American Society of Biomechanics, 2010.
- Schrank ES, Tierney J, Guinn LD, Takahashi K, Razzook AR, **Stanhope SJ**. Virtual prototyping functional characteristics of a passive-dynamic ankle foot orthosis. (Proceedings) American Society of Biomechanics, 2010.
- Takahashi K and **Stanhope SJ**. Sensitivity analysis of loading conditions on mechanical stiffness measurements of a passive dynamic ankle-foot orthosis. (Proceedings) American Society of Biomechanics, 2010.
- Takahashi KZ, Razzook AR, Guinn LD, Schrank ES, **Stanhope SJ**. A method for characterizing combined ankle-foot dynamics during stance phase of gait. (Proceedings) Center for Biomedical Engineering Research Symposium, University of Delaware, 2010.
- Kregling AV, Razzook A, Takahashi K, Schrank E, **Stanhope SJ**. Combined gait dynamics of ankle/foot function. Undergraduate Research Symposium, University of Delaware, 2010.
- Takahashi K and **Stanhope SJ**. A novel method for estimating stiffness of passive dynamic

- ankle foot orthoses. (Proceedings) Center for Biomedical Engineering Research Symposium, University of Delaware, 2009.
- Kregling AV, Takahashi K, Schrank E, **Stanhope SJ**. Ankle joint compensations to passive dynamic ankle foot orthosis use. Undergraduate Summer Scholars Research Symposium, University of Delaware, 2009.
- Schrank E, **Stanhope SJ**. Dimensional accuracy of a rapid fit customization and manufacturing process for orthoses. UD, CEBER Research Symposium May, 2009.
- Takahashi K, **Stanhope S**. A novel method for estimating stiffness of passive dynamic ankle foot orthoses. UD, CEBER Research Symposium May, 2009.
- Schrank E, Hall A, Lumpung C, McLucas J, Neptune R, Razzook A, Siegel K, **Stanhope S**: Does Pure Strength Substitution exist when using an Ankle Foot Orthosis? NIH Poster Day, Bethesda, MD, August, 2006.
- Brindle TJ Mizelle JC, Mclucas JL, **Stanhope SJ**: A pilot study to determine the influence of gastrocnemius muscle on knee movement sense. Society for Neuroscience 35th Annual Meeting. Washington, DC, 2005
- Lebiedowska MK, **Stanhope SJ**: Experimentally derived Model of human Body Growth. (Proceedings) International Society of Biomechanics/American Society of Biomechanics, Cleveland, Ohio, August 2005.
- Tseng S, **Stanhope SJ**: Evidence of movement control adaptation in a lower extremity motor task (Proceedings) International Society of Biomechanics/American Society of Biomechanics, Cleveland, Ohio, August 2005.
- Brindle TJ, Miller JL, Lebiedowska MK, **Stanhope SJ**: Sonographic Measures of Gastrocnemius Length with Two-Joint Passive Movements. (Proceedings) International Society of Biomechanics/American Society of Biomechanics, Cleveland, Ohio, August 2005.
- Sathi K, Brindle TJ, Harris-Love M, Mizelle JC, McLucas J, **Stanhope SJ**. "Coupled Force Sense in Single and Bi-articular Muscles." NIH Summer Poster Day, August, 2005.
- Lumpung C, **Stanhope SJ**: One Step Closer to the Design of an Ideal Passive Dynamic Ankle Foot Orthosis. Road to Discovery: Summer Research Program 52, 2005. Chia TH,
- Brindle TJ, McLucas JL, Miller J, **Stanhope SJ**. "A Novel Approach to the Assessment of Gastrocnemius Length Changes In-Vivo using Ultrasound." NIH Summer Poster Day, August, 2004.
- Nelson KM, Kepple TM, Siegel KL, Halstead LS, **Stanhope SJ**. Ankle Foot Orthosis Contribution to Net Ankle Moments in Gait. American Society of Biomechanics, Toledo, OH: 2003
- Shibanuma N, Lipsky PE, **Stanhope SJ**, Sheehan FT, Yoshiya S, Kurosaka M. Reliability of the Posterior Condylar Line and Transepicondylar Axis for Determining Femoral Rotational Alignment. Orthopaedic Research Society, New Orleans, LA: 2003.
- Haideri N, **Stanhope S**. Comparison of Idealized Standing Balance Strategies Using a Performance Rating Scale. International Society of Biomechanics, Zurich, Switzerland: 2001.

- Bedair H, Bender S, Seigel K, Perry M, **Stanhope S**. Lower Limb Compensation in Anterior Cruciate Ligament Deficiency. Clinical Research Training Fellows Symposium. Groton, CT: 2001.
- Feller K, Brat G, **Stanhope S**, Hallett M. Biomechanics of Balance II: An Investigation of Multi-Segment Stability. Research Day, National Institutes of Health, Bethesda, MD: 2000.
- Benvenuti F, Mecacci R, Ferrandino L, Landini L, Baccini M, **Stanhope SJ**. The Influence of Hemispherical Stroke Side on Spatially Oriented Posture. Annual meeting of the Gait and Clinical Movement Analysis Society. Rochester, MN: 2000.
- Brat G, **Stanhope S**, Hallett M. The Biomechanics of Balance: A Comparison of Anterior and Posterior Stability. Research Day, National Institutes of Health, Bethesda, MD: 1999.
- Ferrel T, Selbie S, **Stanhope S**. Evaluation of a Process for the Creation of Digital Skeletal Models. Research Day, National Institutes of Health, Bethesda, MD: 1999.
- Benvenuti F, Mecacci R, Landina L, Ferrandino L, Baroni A, Hallett M, **Stanhope SJ**. Balance Control during Quiet Standing: Adaptations to Changes in Base of Support and Absent Vision. Annual meeting of the Gait and Clinical Movement Analysis Society, Dallas, TX:1999.
- Manal K, McClay I, **Stanhope S**, Richards J, Galinat B. Improving Estimates of Tibial Rotation Through Marker Configuration and Attachment Methods. Annual meeting of the American Society of Biomechanics, Clemson, SC: 1997.
- Siegel KL, Graff CS, **Stanhope SJ**. Measuring Ankle Joint Stiffness During Gait. Clinical Research Day, National Institutes of Health, Bethesda, MD: 1997.
- Kepple TM, Sommer HJ, Siegel KL, **Stanhope SJ**. Three-Dimensional Normative Databases of Muscle Origins and Insertions for the Lower Extremities. Clinical Research Day, National Institutes of Health, Bethesda, MD: 1997.
- Benvenuti F, Bandinelli S, Benvenuti E, Ferrucci L, Gineprari I, Mecacci R, Baroni A, Rabuffetti M, Hallett M, **Stanhope SJ**. Test-retest Reliability and Concurrent Validity of a Posturographic Protocol. NASGCMA, Chicago, IL: 1997.
- Kepple T, Siegel KL, **Stanhope SJ**. The Use of Two Foot-floor Models to Examine the Role of the Ankle Plantar Flexors in the Forward Acceleration of Normal Gait. NASGCMA, Chicago, IL: 1997.
- Chou G, Holden JP, **Stanhope SJ**. The Effect of Walking Speed on Mechanical Power and Work Patterns at Lower Extremity Joints. Poster Day 95. Warren Grant Magnuson Clinical Center, NIH, Bethesda, MD: 1995.
- Graff C, Brown MC, **Stanhope SJ**. The Relationship between Isokinetic Strength and Stair Ascent Joint Moments. Poster Day 95, Warren Grant Magnuson Clinical Center, NIH, Bethesda, MD: 1995.
- Kepple TM, Sommer HJ, Siegel KL, **Stanhope SJ**. Three-dimensional normative databases of muscle origins and insertions for the lower extremities. In: Proceedings of the 18th Annual Meeting of the American Society of Biomechanics, Columbus, OH: 1994;1:37-38.

Chou G, Holden JP, **Stanhope SJ**. The Effect of Walking Speed on Net Muscle Moments at the Knee Joint. NIH Poster Day, Bethesda, MD: 1994.

Smeeder P, **Stanhope S**, Thomas S, Hallett M. When a Push Becomes a Shove: A model of Human Balance. NIH Poster Day, Bethesda, MD: 1994.

Buczek FL, Kepple TM, Siegel KL, **Stanhope SJ**. Effect of One, Three, and Six Degree-of-Freedom Modeling Upon Joint Powers at the Normal Knee. Second World Congress of Biomechanics, Amsterdam, the Netherlands: 1994.

O'Connell PG, Siegel Lohmann K, Kepple T, **Stanhope SJ**, Gerber LH. Gait in Rheumatoid Arthritis with Metatarsalgia. American Association of Physical Medicine and Rehabilitation, Washington, DC, USA: 1991.

BOOKS, CHAPTERS & PUBLISHED REPORTS

Schrank ES, **Stanhope SJ**. Orthotic Device Research. In Full Stride: The Past, Present, and Future of Lower Extremity Gait Systems. Springer Publishing. in press.

Stanhope SJ. Advanced Methods in Computer Based Movement Analysis in Education and Clinical Practice. Theoretical Issues in Ergonomics Science, 2005;6(3-4):313-17.

Stanhope SJ. An American Perspective. Theoretical Issues in Ergonomics Science, 2005;6(3-4):349-51.

Siegel KL, Kepple TM, **Stanhope SJ**. A new understanding of gait compensations for lower extremity impairments. Orthopaedic Division Review, November/December:15-16, 2003.

Stanhope SJ. Technical and Methodological Issues in Clinical Gait Analysis. (Proceedings) Italian Clinical Movement Analysis Society (SIAMOC) 2002;1:9.

Stanhope SJ. A Trans-Rehabilitation-Research-Domain (TRRD) Model for Physical Disabilities Research. (Proceedings) Building Rehabilitation Research Capacity, NIH sponsored conference, 2001.

Stanhope SJ, Benvenuti F, ed., Clinical Movement Analysis for Rehabilitation Medicine, UO di Geriatria, Florence, Italy, 2000.

Kepple TM, **Stanhope SJ**. Move3D Software. In: Winters JM and Crago PE, editors. Biomechanics and Neural Control of Posture and Movement. New York: Springer-Verlage, 2000:659-660.

Stanhope SJ. Clinical Movement Analysis in the 21st Century. (Proceedings) Italian Clinical Movement Analysis Society (SIAMOC) 1999;1:9-12.

Quatrano LA, **Stanhope SJ**, ed., Gait analysis in Rehabilitation Medicine. National Center for Medical Rehabilitation Research. Bethesda, MD, 1996.

Stanhope SJ. Functional Movement Analysis as a Surgical Outcomes Indicator. (Proceedings) Sixteenth Annual Reunion Day Conference, Avoiding Complications in Adult Reconstructive Surgery, West Virginia University, Department of Orthopedics, Morgantown, WV: 1995;1.

Siegel KL, **Stanhope SJ**: The role of a clinical biomechanics evaluation program in a rehabilitation medicine department. Proceedings of the 12th International Congress of the

World Confederation for Physical Therapy, 714, 1995.

Stanhope SJ. An Overview of Activities in the Warren Grant Magnuson Clinical Center Biomechanics Laboratory. (Proceedings) Contributions of Biomedical Engineering to Biology and Medicine, National Institutes of Health, Bethesda, MD: 1994;1:49.

COURSES, SEMINARS, and LECTURES – University of Delaware

- BMSC 866 Special Problems
- HESC 485 Research in Exercise Science
- BMSC 868 Independent Research
- MEEG 466 Independent Study
- UNIV 401 Senior thesis
- UNIV 369 UG Research Sustaining
- KAAP 690 Biomechanical Methods
- KAAP 400 Research Methods (honors and non-honors sections)
- NURS467-080 Biomedical Research Ethics (Guest Lecturer)
- College of Health Sciences, spring faculty meeting – How Study Groups Really Work.
- Clinical Research Ethics – UD responsible conduct of research annual training seminar.

POST-DOCTORAL FELLOWS - Primary Mentor

Elisa Schrank, Ph.D.	2012-present	(Research Faculty, University of Delaware)
Timothy Brindle, Ph.D., PT	2003-2007	(Research Faculty, George Washington Univ.)
Saryn Goldberg, Ph.D.	2005-2007	(Assistant Professor, Hofstra University)
Melanie C. Brown, MD	1995-1996	(Assistant Professor, Johns Hopkins University)
John A. Orsini, MD	1994	(Assistant Professor, University of Rochester)
John P. Holden, Ph.D.	1993-1997	(Director, Clinical Movement Analysis Laboratory, San Diego Children's Hospital)
Frank L. Buczek, Ph.D.	1991-1994	(Director, Gait Laboratory, Erie Shriners Hospital)

MENTORSHIP ACTIVITIES – Student mentoring

Keyi Xu, UD, Undergraduate Honors Student, Mechanical Engineering

Cassandra Gorman, Research Resident, Independence Prosthetics and Orthotics

John David Collins, UD, MS Graduate Student, Biomechanics and Movement Sciences (BIOMS) interdisciplinary program, 2014 – present.

Anahid Ebrahimi, UD, Doctoral Graduate Student, Dept. of Mechanical Engineering. 2013-present.

Travis Pollen, UD, MS Graduate Student, Biomechanics and Movement Sciences (BIOMS) interdisciplinary program, 2008-present.

Daniel Ragonesi, UD, Doctoral Graduate Student, Dept. of Mechanical Engineering. 2011-present.

Alexander Razzook, UD, Doctoral graduate student in Biomechanics and Movement Sciences (BIOMS) interdisciplinary program, 2008-present.

Dan Feeney, UD, MS Graduate Student, Biomechanics and Movement Sciences (BIOMS) interdisciplinary program, 2013 – 2015

Lakishia Guinn, UD, Doctoral graduate student in Biomechanics and Movement Sciences (BIOMS) interdisciplinary program, 2008-present.

Elisa Schrank, UD, Doctoral graduate student in Mechanical Engineering, 2008-2012.

Kota Takahashi, UD, Doctoral graduate student in Biomechanics and Movement Sciences (BIOMS) interdisciplinary program, 2008-2012.

Charles Gleason, Elkton, MD high school student. Conducted a summer research internship and subsequently was admitted to the University of Delaware as a Freshman Engineering student.

Leah Putman, Ronald E. McNair Scholar, Senior Honors Thesis. UD, Dept. of Mechanical Engineering. 2009-2011.

Alissa Kregling, UD, Dept. Health Nutrition and Exercise Science. Honors, Undergraduate research scholar. 2009-2011.

Anna Byrnes, UD, Dept. Health Nutrition and Exercise Science. Undergraduate research experience. 2010.

Deepti Bajaj, MS, Evaluation of Bone Architecture in Children with Osteogenesis Imperfecta, UD, Dept of Health Nutrition and Exercise Science. 2010.

Chandra Loyd, MS, The relationship between muscle strength asymmetry and gait asymmetry in unilateral, trans-tibial amputees. UD, Department of Health, Nutrition and Exercise Science. 2009.

Brittany Wilder, UD, Mechanical Engineering. Undergraduate independent research project. 2009.

Shih-Chiao Tseng, Ph.D., Impaired Reactive Postural Control in the Elderly During Voluntary Stepping, Physical Therapy and Rehabilitation Science, University of Maryland Medical School, 2004-2008.

Neil D. Weston, Ph.D., Three Dimensional Trajectory Determination using Rigid Body Kinematics from Phase Contrast Magnetic Resonance Imaging Velocity Fields, Pre-doctoral graduate student, the Catholic University of America, Department of Biomedical Engineering, 2007.

Weidong Luo, Ph.D., A novel method for quantifying bone shape, Pre-doctoral graduate student, the Catholic University of America, Physics Department, 2007.

Tracy Rausch, MSBE, A Method for Mechanically Loading Joints During Dynamic Magnetic Resonance Imaging, M.S. degree, the Catholic University of America, Department of

- Mechanical Engineering, 2006.
- Claudia Mazza, Ph.D., Quantitative Methods for the Evaluation of an Individual's Locomotor Functional Limitation, Istituto Universitario Scienze Motorie, Rome, Italy, 2004.
- Nasreen F. Haideri, Ph.D., Evaluation of the Biomechanical Strategies of Standing Balance, the Catholic University of America, Department of Biomedical Engineering, 2004.
- Senior Design Project, A "smart" body weight support system. Biomedical Engineering Department, Catholic University of America, 2003-2004 academic year.
- Senior Design Project, A real-time gait velocity and biofeedback system. Biomedical Engineering Department, Catholic University of America, fall semester, 2003.
- Nadia Al-Ghreimil, Ph.D., Motion Editing by Combining Partial Pose, The George Washington University, School of Engineering and Applied Science, 2002.
- Mukul Talaty, Ph.D., Intersegmental Dynamics Analysis of Normal and Orthotically Constrained Gait. Drexel University, 2002.
- Hany Bedair. Lower Limb Compensation in Anterior Cruciate Ligament Deficiency. Clinical Research Training Fellow, Yale Medical School. 2000-2001.
- Kelley Feller. Biomechanics of Balance II: An Investigation of Multi-Segment Stability. The Whitaker Biomedical Engineering Internship Program. Trinity College, Biomedical Engineering, 2000.
- Gabriel Brat. The Biomechanics of Balance: A Comparison of Anterior and Posterior Stability. The Whitaker Biomedical Engineering Internship Program. Arizona State University, Biomedical Engineering, 1999.
- Tod Ferrel. Evaluation of a Process for the Creation of Digital Skeletal Models. NIH Summer Research Intern, the Catholic University of America, Biomedical Engineering, 1999.
- Shih-kai Chung, Ph.D., Animation of Human Walking in Virtual Environments, The George Washington University, School of Engineering and Applied Science, 1999.
- Kurt Manal, Ph.D., Comparison of Surface Mounted Markers and Attachment Methods in Estimating Tibial Rotations During Walking, the University of Delaware, Department of Biomechanics and Movement Science, 1998.
- Douglas J. Willey, Ph.D., Parameterized Motion Models for Computer Graphics Characters, the George Washington University, School of Engineering and Applied Science, 1997.

ACTIVE & TERMINATED IRB APPROVED PROTOCOLS - PI status

University of Delaware

- 2011-present Prescription of passive dynamic ankle foot orthoses
- 2009-present Gait Adaptations to Passive Dynamic Ankle-Foot Orthosis Use – Technology Development Pilot Project.
- 2008-present Exemption from full Human Subject Research Board review (2/26/08) to access the unlinked database related to terminated protocol 05-CC-0175 "Gait Adaptations to Passive Dynamic Ankle-Foot Orthosis Use."

National Institutes of Health

- 1990-2007 A Rigid Body Database on Human Movement. 90-CC-0168.
- 2005-2007 Coupled Joint Proprioception and Multi-joint Movement in the Lower Extremity: A Pilot Study. 05-CC-0042.
- 2005-2007 Gait Adaptations to Passive Dynamic Ankle-Foot Orthosis Use. 05-CC-0175.
- 2003-2006 Virtual Functional Anatomy. 03-CC-0060.
- 2005-2006 Hypertonia in Patients with Cerebral Palsy. 05-CC-0204.
- 1994-1996 Skeletal Tracking with Skeletal Fixation. 94-CC-0178.

PUBLIC RELATIONS & SERVICE

- Leadership Delaware, Inc. – Mentor and inspirational presenter to the 2012 class, (<http://leadershipdelaware.org/>), 2012-present
- Huffington Post – “Oscar Pistorius: Unfair Advantage or Healthy Debate?” Opinion Editorial, 2012. (http://www.huffingtonpost.com/steven-stanhope/oscar-pistorius_b_1758065.html)
- CBS Philadelphia – Jericka Duncan reporting “Oscar Pistorius didn’t get off to a great start.” Expert opinion commentary for 2012 Olympic video and copy pieces. 2012 <http://philadelphia.cbslocal.com/2012/07/15/double-amputee-set-to-compete-in-olympics-inspires-others/>
- Delaware Technology Forum – Cutting Edge Biomedical Engineering, Newark, DE, 2012, “Freeform Direct Digital Manufacturing: Just What the Doctor Ordered.”
- Harford County, MD – “March for Babies Day” volunteer, 2011.
- Co-coordinated a visit of a delegation from the Italian Health Ministry and the Italian NIH to the National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 2008.
- Assisted Louis Quatrano, Ph.D. Program Director, BSRE, National Center for Medical Rehabilitation Research, National Institute of Child Health and Human Development, National Institutes of Health, in the development of a subsequently awarded contractual mechanism for the establishment of a health services data center in the 11th region of the Italian Health care system, 2008.
- Co-hosted a visit to UD from Frank L. Buczek, Jr., Ph.D. Chief, Engineering and Control Technology Branch, NIOSH, Morgantown, WV. Initiated plans for joint research activities in HNES and the potential for HNES to provide contractual project support, 2008.
- Hosted a UD visit from the Honorable Berengère Poletti of the French Parliament accompanied by members of the US French Embassy and the French Scientific Attaché, 2007.
- Founding Coordinator, Coalition for Community Involvement in Educational Issues, 2005.
- Career Day student advisor, Montgomery County Public Schools, 2003.

On Background Consultant, Dateline NBC, NBC NEWS, 1996-2003

Science fair judge, Montgomery County Public Schools, 1999-2002.

Youth Basketball Coach, Montgomery County Department of Recreation, 1998-2001. Youth soccer coach, Damascus Soccer Club, Damascus, MD, 1997-2001.

Member of the, Cedar Grove Elementary School Technology Development Committee, Germantown, MD, 1997-1999.

Member, Board of Directors, Jumping Jacks Gymnastics Center, Germantown, MD, 1996-1999.

Volunteer, grounds maintenance, St Bernadett's School, Silver Spring, MD, 1995-1996.

As a volunteer member of the Potomac Appalachian Trail Club, I maintained a one-mile section of the Appalachian Trail, 1989-1991.

SPECIALTY TRAINING – Current certificates

- Supervisory, Management and Executive Training
- Standards of Ethical Conduct - Government Ethics
- Research Ethics
- Technology Transfer
- Protection of Human Research Subjects
- Basic Project Officer Training
- Merit Systems Principles
- Equal Opportunity Employment (EEO)
- Safety and Emergency Preparedness
- Infection Control - Universal Precautions
- Quality Improvement
- Computer Security Awareness
- Section 508