**CURRICULUM VITAE**

 **Revised: 10/15/2020**

**Name:** Andrew John Butler

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**Citizenship:**

US

**Current Titles and Affiliations:**

**Academic appointments:**

1. **Administrative appointments:**

Dean, School of Health Professions, The University of Alabama at Birmingham. 7/19-

Associate Dean for Research, Byrdine F. Lewis College of Nursing & Health Professions, Georgia State University. 8/12-7/19

Chair Department of Physical Therapy. Byrdine F. Lewis College of Nursing & Health Professions, Georgia State University. 7/12-7/18

1. **Academic appointments:**

Professor (with tenure). Department of Physical Therapy. School of Health Professions. The University of Alabama at Birmingham. 7/19-

Professor (with tenure). Department of Physical Therapy. Byrdine F. Lewis College of Nursing & Health Professions. Georgia State University. 8/12-7/19

Associate Professor Department of Rehabilitation Medicine Emory University School of Medicine. 9/07-7/12

Assistant Professor Department of Rehabilitation Medicine Emory University School of Medicine. 7/01-8/07

1. **Joint and secondary appointments:**

Professor, Department of Physical Medicine and Rehabilitation. School of Medicine, The University of Alabama at Birmingham. December 2019-

Senior Scientist. B.L. Harbert Institute for Innovation and Entrepreneurialism. Collat School of Business, The University of Alabama at Birmingham. January 2020-

Associate Faculty, Institute of Health Administration, J. Mack Robinson College of Business. Georgia State University. August 2017-2019.

Associate Faculty, Department of Kinesiology and Health, College of Education and Human Development. Georgia State University. 2017-2019.

Associate Faculty, Neuroscience Institute. Georgia State University. 2012-2019.

Affiliate Faculty, Gerontology Institute. College of Arts and Sciences. Georgia State University. 2014-2019

Professor Department of Rehabilitation Medicine Emory University School of Medicine. 7/12-

Advisory Board. Center for Human Achievement of Movement and Performance (CHAMP). School of Applied Physiology. Georgia Tech. 2012-

Member Birmingham/Atlanta Geriatric Research Education and Clinical Center (GRECC) Affiliate Investigator. 2012-

Adjunct Professor, Applied Physiology, School of Biological Science, The Georgia Institute of Technology. 2006-

Faculty, Program in Neuroscience, Graduate Division of Biological and Biomedical Sciences, Emory Univ. 3/03-7/12

Research Health Scientist, Rehabilitation Research and Development Center of Excellence, Atlanta Veterans Administration Medical Center. 10/2001-

Associated Faculty, Department of Psychology, Emory College. 2003-12

Faculty, Integrative Graduate Education and Research Traineeship (NSF-IGERT), Georgia Institute of Technology, 2005-2010.

**Education:**

2009, M.B.A., Goizueta Business School, Emory University, Atlanta, Georgia.

1998, M.S.P.T., School of Physical Therapy, Texas Woman's University, Houston, Texas, Elizabeth J. Protas, Ph.D, PT.

1995, Ph.D. Motor Control, Department of Integrative Physiology, The University of Iowa, Iowa City, Iowa, Warren G. Darling, Ph.D.

1987, B.S. Honors in Biology with a minor in Chemistry, Loras College, Dubuque, Iowa, David B. Czarnecki, Ph.D. (deceased)

**Postgraduate Training**:

1999-2001 Heinrich-Heine University, Düsseldorf, Germany, Post-Doctoral Fellow, Department of Neurology, H.J. Freund, M.D.

1996-1998 Texas Woman’s University, Houston, Texas, Post-Doctoral Fellow, School of Physical Therapy, Elizabeth Protas, Ph.D, P.T.

1995-1996 University of Iowa, Iowa City, Iowa, Post-Doctoral Fellow, Department of Exercise Science, Warren Darling, Ph.D.

**Committee Memberships:**

1. **National and International**

**The Alpha Eta Society.** The national scholastic honor society for Allied Health Professions. Treasurer of national organization. 2017- 2020.

**Association of Schools of Allied Health Professions.** Interprofessional Education (IPE) committee. Oct. 2018-present.

**Association of Schools of Allied Health Professions.** Chair Nominations and Elections Committee Jan. 1, 2016- present.

**Association of Schools of Allied Health Professions.** Advocacy Committee Jan. 1, 2016-Dec 31, 2018.

**American Heart/Stroke Association.** Stroke,Nutrition and Quality of Care and Outcomes Research Council. 2007-present

**American Physical Therapy Association.** Neurology and Research Section. 2001-present

**Tri-State Stroke Network.** Member since 2007. Chair 2008-2010.

1. **Institutional**

**Search Committee member.** Senior Vice President for Finance and Administration. University of Alabama at Birmingham. September 2020-

**Executive Committee.** UAB Comprehensive Neuroscience Center. University of Alabama at Birmingham School of Medicine. May 2020-

**Advisory Committee.**[**HelpBeatCovid19**](https://www.helpbeatcovid19.org/). Member. The HelpBeatCovid19.org project advisory committee charged with providing advice and recommendations to the project leaders. April 2020.

**Ad Hoc Evaluation Committee.** Chair.Triennial evaluation Senior Vice-President for Financial Affairs. Georgia State University. March 2019.

**Graduate School Development Committee.** Member of committee whose purpose was tooutline a structure that led to formation of a graduate school. Georgia State University. 2018-2019.

**University Promotion and Tenure Committee.**  Member of advisory panel charged with making promotion and tenure recommendations to the Provost. Georgia State University. August 2018-2019.

**Neuroscience Institute bylaws committee**. Georgia State University. May 2018-2019.

**Data Access, Governance, and Security (DAGS) Committee.** Address issues concerning data access, governance and security. Georgia State University. May 2018-2019.

**Next Generation Scholars Grant Review Committee.** Internal grant program whose purpose is torecruit innovative scholars in University strategic areas. Georgia State University. 2016-2019.

**University Senate.** Georgia State University. Budget Committee. 2014-. Chair 2018-2019.

**University Senate.** Georgia State University. Major Repairs and Renovations committee (MRRF). Chair 2015-2019.

**University Senate.** Georgia State University. Research Committee. Subcommittee Institutional Review Board (IRB). 2014-2019.

**Search committee member Associate Provost for Graduate Programs.** Georgia State University.Aug.-Dec. 2013-May 2014.

**Alumni Distinguished Faculty Award Committee.** Georgia State University. Committee member. The award is based upon excellence in teaching, scholarship and service. This is one of the highest honors GSU bestows upon its faculty for academic achievements. April 2013.

**Emory Alliance Credit Union. ALM Committee.** Member of asset, liability and management committee. Emory Alliance Credit Union. 2011-2013

**Chair-Emory University Senate Athletics and Recreational Committee.** Chair of theEmory University Faculty Senate Committee whose purpose is to represent the interests of the entire university community in providing advice and oversight for the athletic and recreation programs and facilities at Emory University. Faculty liaison to Men’s and Women’s swim teams. Member 2003-2008, Chair 2008-2010.

**University of Iowa Graduate Student Senate/Travel Funds Committee Chair**. University of Iowa Graduate Student Senate. Involved in evaluating and allocating funds to graduate students applying for travel assistance to professional conferences. 1991-1992.

**University of Iowa Human Subjects Review Committee**. University of Iowa. Graduate student member who was involved in review of protocols from investigators who perform research using human subjects at the University of Iowa. 1992-1993.

**University of Iowa University of Iowa Research Council**. University of Iowa. Assisted Vice President for research in a regular advisory capacity. A graduate student member of the council that gave regular consideration to matters such as the establishment of general policies regarding the University's research and creative efforts, and the review of policies and procedures concerned with securing and allocating funds for support of research and creative activity. Member of Indirect Cost Subcommittee: Incentives 1992-1993.

1. **College**

**Executive search committee**. Multiple Department Chair searches: Nursing, Nutrition, Physical Therapy and Occupational Therapy. Georgia State University, Lewis College of Nursing and Health Professions, Atlanta, GA. 2013-2017.

**Research Committee**.B.F. Lewis College of Nursing and Health Professions. Georgia State University. Ad hoc member.

**Occupational Therapy Department Development committee**. Co-Chair (with D. Benardot) of committee charged with developing a prospectus for new Department of occupational therapy. Georgia State University. Lewis College of Nursing and Health Professions. Aug-Dec 2012.

**Emory University. School of Medicine. Comprehensive Stroke Center Development Committee.** The goal of this committee is to develop a futuristic and integrated stroke program that coordinates all clinical, research, and educational activities across all WHSC sites and Grady hospital. 2005-2006.

**Georgia Institute of Technology. School of Applied Physiology**. Faculty Search Committee. Fall. 2005

1. **Departmental**

**Georgia State University Physical Therapy Faculty Practice.** President Board of Directors. 2012-2019, Member 2012-,

**Georgia State University. Department of Physical Therapy**. National Physical Therapy Student Honor Society. Committee member. 2019-.

**Georgia State University. Department of Physical Therapy**. Faculty search committee ACCE (co-chair), Tenure Track (co-chair) and Department Chair. 2012-2018.

**Emory University Department of Rehabilitation Medicine.** Appointments and Promotion Committee 2007-2012.

**Emory University Department of Rehabilitation Medicine.** Grand Rounds Committee**.** Emory University. 2008-present

**Emory University Department of Rehabilitation Medicine Webpage Committee Chair.** 2003-2007.

1. **Divisional**

**Emory University Division of Physical Therapy**. Faculty Search Committee. Fall 2011-2012

**Emory University Division of Physical Therapy**. Academic Affairs Committee. 2005-present

**Emory University Division of Physical Therapy**. Public Relations/Alumni Committee2007-2009

**Emory University Division of Physical Therapy**. Admissions Committee2009-present

**Department of Veterans Affairs Medical Center, Atlanta, GA. Research and Development Center of Excellence.** Space utilization and equipment committee 2009-2017.

**Consultantships:**

Chair. Clinical Advisory Board. Movi Medical Inc. Aug. 2014-2018.

Consultant and member of Spasticity Development Advisory Board. Allergan Corporation. 2005-2007.

Columbia Seminars. 2007-2009.

Guidepoint Global. 2012-2019.

Program Reviewer. Florida International University. Department of Physical Therapy, Doctor of Physical Therapy Program. 2013.

**Advisory Boards**

Member, Board of Directors. The University of Alabama at Birmingham Research Foundation (UABRF). 2019-present.

Member, Board of Directors. Lakeshore Foundation. Birmingham, AL. Oct. 2019-2023.

Member, Board of Directors. Association of Schools of Allied Health Professions. Oct. 2019-2022.

Member, Board of Directors. The Georgia State University Research Foundation (GSURF). 2017-2019.

Member, Board of Directors. The Georgia Foundation for Physical Therapy. 2017-2019

Member, Board of Directors. The Alpha Eta Society. The national scholastic honor society for Allied Health Professions. 2016-2017.

Member, Advisory Board. Department of Occupational Therapy. Georgia State University. 2016-2019.

**Editorships and Editorial Boards:**

Editorial Board. Annals of Physical Therapy. 2019-

Editorial Board. Rehabilitation Science. 2018-

Editorial Board. Telehealth and Medicine Today. 2017-

Editorial Board. International Physical Medicine & Rehabilitation Journal (IPMRJ). 2016

Editorial Board. Journal of Stroke Research. 2016-

Editorial Board. Physical Therapy & Rehabilitation 2016-

Editorial Board. Physiotherapy Clinics 2016-

Associate Editor. Frontiers in Human Neurosciences. 2015-

Editorial Board. Journal of Brain Sciences. 2014-

Editorial Board. Advances in Medicine, Rehabilitation. 2013-

Co-Editor with Martin Edwards, Magdalena Ietswaart and Philip L. Jackson special issue “Mental Practice: clinical and experimental research in imagery and action observation.” Frontiers in Human Neuroscience. 2014.

Guest Editor: Special Issue on Neuroimaging and Rehabilitation. Journal of Physical Therapy. 2007 Volume 87.

Editorial Board. Journal Patient Preference and Adherence. 2007-

Editorial Board. Journal of Patient Intelligence. 2009-

Editorial Board. Physiotherapy Research International Journal. 2010-

Consulting Editor, Experimental Aging Research. 2008-

**Manuscript reviewer:**

 Physiotherapy Theory and Practice. 1998-

 Journal of Rehabilitation Medicine. 2002-

 Archives of Physical Medicine and Rehabilitation. 2003-

 Stroke 2004-

 Clinical Neurophysiology 2004-

 Physical Therapy 2005-

 Neurology 2005-

 NeuroImage 2005-

 Neurorehabilitation and Neural Repair 2005-

 Restorative Neurology and Neuroscience 2006-

Expert Review of Neurotherapeutics 2006-

Neuroscience & Biobehavioral Reviews 2007-

Experimental Aging Research 2008-

Motor Control 2008-

Experimental Brain Research 2008-

Cerebral Cortex 2009-

Topics in Stroke Rehabilitation 2009-

Journal of NeuroEngineering and Rehabilitation 2009-

BiomedCentral (BMC) Neurology 2009-

Journal of Imagery Research in Sport and Physical Activity 2010-

Physiotherapy Research International Journal. 2010-

Brain and Cognition. 2011-

Imaging in medicine. 2011-

Stroke Research and Treatment 2011-

Medicine & Science in Sports & Exercise 2011-

American Journal of Physical Medicine and Rehabilitation 2012-

Journal of Neuroscience Methods 2012-

Journal of Motor Behavior 2012-

Neuropsychiatry 2012-

Journal of Neurologic Physical Therapy 2013-

Neuroscience Letters 2014-

Telehealth and Medicine today 2017-

Medical Research Methodology 2017-

**National Committees and Service: Grant Review Boards and ad hoc Grant Reviews**

National Institutes of Health, Center for Scientific Review (CSR). Musculoskeletal, Oral and Skin Sciences (MOSS). Special Emphasis Panel/Scientific Review Group 2019/08 ZRG1 MOSS-V (15) B. July 2019.

Swiss National Science Foundation (SNSF). Ad-hoc grant review panel. October 2014, January 2019.

National Institutes of Health, Center for Scientific Review (CSR). Biobehavioral & Behavioral Processes (ZRG1 BBBP-B) IRG- ad hoc grant reviewer 2018.

National Institutes of Health, Center for Scientific Review (CSR). Neural Control of Mobility in Aging (ZAG1 ZIJ-3 A1). National Institute of Aging. IRG- ad hoc grant reviewer 2018.

European Research Council synergy grant 2018. ERC-SYG-PE. June 2018.

Oak Ridge Institute for Science and Education. Nazarbayev University Research Review. 2016, 2017.

National Institutes of Health, Center for Scientific Review (CSR). Motor Function, Speech, and Rehabilitation (MFSR)- ad hoc grant reviewer 2005, 2007, 2017.

Department of Veterans Affairs. Rehabilitation Research and Development Service Scientific Merit Review Board. Member Brain Injury: Brain Health & Injury [RRD1/B] panel. 2/2013-3/2019.

National Science Foundation (NSF). Review Panel. Smart and Connected Health (SCH). March 2016, June 2018, March 2019.

Canada Foundation for Innovation’s (CFI). Expert Committee (EC) member. 2015.

Innovation Fund Competition. Toronto, Canada. Sept. 11, 2014.

U.S. Department of Veterans Affairs. Federal Advisory Committee grant reviewer.

Maryland Industrial Partnerships Program (MIPS)-ad hoc grant reviewer. June 2013.

Department of Veterans Affairs. Scientific Merit Review Board- ad hoc grant reviewer. Rehabilitation Research and Development Small Projects in Rehabilitation research (SPiRE) Program. May 2013, Oct. 2013, Oct. 2014, Oct. 2016.

James and Esther King Biomedical Research Program. New Investigator Research (NIR) grant reviewer. March 2012.

Commonwealth of Pennsylvania Department of Health. Pennsylvania Final Performance review- 11-12 Cycle B. Albert Einstein Healthcare Network. April 2012.

National Institutes of Health, Center for Scientific Review (CSR). Musculoskeletal, Oral and Skin Sciences IRG (MOSS D53)- ad hoc grant reviewer 2009.

Arizona Biomedical Research Commission. Ad hoc grant reviewer 2007.

**International Committees and Service: Grant Review Boards and ad hoc Grant Reviews**:

Medical Research Council, United Kingdom. Ad hoc grant reviewer 2008, 2009

The Stroke Association-United Kingdom- ad hoc grant reviewer 2010.

Wellcome Trust- United Kingdom- ad hoc grant reviewer 2011.

**Data Safety and Monitoring Board (DSMB).** NIBIB-1RC1EB010915-01. Maysam Ghovanloo (PI). Development and translational assessment of a tongue-based assistive neuro-technology. The Georgia Institute of Technology. Member 2009-2012.

**Association for the Accreditation of Human Research Protection Program (AAHRPP)**.

Interviewed by 2-person board regarding issues related to conduct of funded research and research enterprise in general as part of the accreditation process. Represented VAMC (Dec. 2010) and Emory University (March 2011).

**Honors and Awards:**

APTA Fellow (FAPTA). Catherine Worthingham Fellow of the American Physical Therapy Association. March 2019.

ASAHP Fellow. The Association of Schools of Allied Health Professions (ASAHP). October 2018.

Georgia State University Leadership Development Program. 2016-2017.

Association of Schools of Allied Health Professions (ASAHP) Leadership Development Program. Leadership Development Class of 2013. Program Mentor: 2016, 2018

Woodruff Leadership Academy Fellow. Emory University School of Medicine and Robert W. Woodruff Health Sciences Center. 2010-2011. Mentor: Michael M.E. Johns, M.D., and Stuart Zola, Ph.D.

Invited participant. Physical Therapy and Society Summit (PASS). Leesburg, Virginia. February 2009.

Fellow. The Council of the American Heart and Stroke Association. 2007.

Extramural Loan Repayment Program for Clinical Researchers (LRP-CR). National Institute of Child Health and Human Development. NICHD L#0HD045620-01. First award: 6/03-6/05, second award 7/05-7/06, third award 7/07-7/08.

Outstanding Research Proposal, ERRIS Intensive workshop on grant writing, preparation, and submission in rehabilitation research. University of Virginia. NIH-NCMRR award 1 R24 HD 39631 to J. Blackman. February 2003.

Young Investigator Award, International Stroke Symposium: Translating Principles of Brain Plasticity into Clinical Interventions. Center on Aging, University of Kansas Medical Center. NIH award 1 R13 HD041533 to R. Nudo. April 2002.

Organization for Human Brain Mapping. NIH Human Brain Project Travel award recipient. Attended Seventh Annual Meeting of the Organization for Human Brain Mapping. June 2001.

Organization for Human Brain Mapping. NIH Human Brain Project Travel award recipient. Attended Sixth Annual Meeting of the Organization for Human Brain Mapping. June 2000.

American Physical Therapy Association, Section on Research. Travel award recipient to attend Neuroplasticity: Interface of basic and applied Sciences in Clinical Practice Retreat. 1998.

University of Rochester Center for Visual Science. Travel award recipient to attend 20th annual Neural Control of Spatial Behavior Symposium. 1996.

American Physical Therapy Association. Travel award recipient to attend Multisegmental Motor Control Retreat. 1995.

University of Iowa Graduate College. Travel endowment gift from Isabel Demple estate. 1995.

**Society Memberships:**

Alpha Eta. National Honor Society of Allied Health Professions 2014-

Society of International Business Fellows. 2012-

American Stroke Association Stroke council: Premium Professional member, 2005-.

American Physical Therapy Association: Neurology and Research Sections member, 2000-.

Organization for Human Brain Mapping, 2000-.

Society for Neuroscience, 1996-.

International Brain Research Organization, 1990-.

Sigma Xi, The Scientific Research Honor Society, 1990-.

International Society of Motor Control, 2001-.

**Research focus:**

My research focuses primarily on how volitional movement, motor learning, and organized motor behavior are represented in the human brain. We are interested in evaluating the effect of constraint-induced movement therapy (CIMT) on cortical motor reorganization following stroke using non-invasive brain stimulation, Near-infrared spectroscopy (NIRS) and functional magnetic resonance imaging (fMRI). This approach may provide some insight into mechanisms responsible for restitution of functional capability in using an impaired limb that had previously not been used to manipulate the environment following a stroke.

**Grant Support:**

1. **Active support**:
2. **Federally funded:**

none

1. **Other:**

Investigator status: Advisory Board (co-PI: Robinson, Young, Synco)

Robert Wood Johnson Foundation

Title: Summer Health Professions Education Program

Amount: $330,000

Effort: 0.01 Calendar months

Dates: 10/1/19-9/30/20

1. **Pending:**

Investigator status: Co-PI (with Feng Yang)

NIH R01.

Title: Effects of Vibration Training in Improving Risk Factors of Falls among Individuals with Chronic Stroke.

Amount: $1,250,000

Effort: 2%

Date: 07/01/20-06/30/25 (*resubmitted 3/2020*)

Investigator status: co-I (PI: MacCalla J, Zyrobotics, LLC)

National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), Small Business Innovation Research Program (SBIR) phase I

Title: A Home-Based Accessible Gaming System that Encourages Upper-Arm Exercises for Stroke Survivors

Amount: $6,000

Effort: 0.05

Date: 2/1/20-12/30/21 (*resubmission*)

1. **Previous Support**

Investigator status: Consultant (PI: Shinohara, M)

NIH R03

Title: Noninvasive VNS for Neuromotor Adaptations

Amount: $50,000

Effort: 0.1 Calendar months

Dates: 6/1/18-6/30/20

Investigator status: Co-I (PI: Crosson, B)

US. Department of Veterans Affairs. C2358-C

Title: Center for Visual and Neurocognitive Rehabilitation (CVNR)

Amount: $5.0M

Effort: 0.4

Date: 10/01/17-9/30/22

Investigator status: Co-I (PI: Kesar, T.)

NIH K01: 1K01HD079584-01

Title: Cortical and spinal correlates of stroke gait rehabilitation

Amount: $500,000 (direct)

Effort: 0.5 Calendar months (gratis contribution)

Date: 03/2014 -02/2019

Investigator Status: PI

N31-FY13Q1-00-P00621. U.S. Department of Veterans Affairs- Office of Rural Health. Veterans Rural Health Resource Center. Innovations Portfolio

Title: Tele-Stroke Robotic Rehabilitation (TSRR)

Amount: $3,527,447

Effort: 1.2 calendar months

Dates: 5/1/2016-9/31/2018

Investigator status: co-PI

Title: A tongue operated robotic rehabilitation system for upper extremities

Markus Foundation

Amount: $25,000

Date: 1/1/2016-10/1/2017

Investigator status: PI

Georgia State University, Brains & Behavior Seed Grant

Title: Brain network activity changes following stroke and rehabilitative treatments

Amount: $30,000

Effort: 0.5

Date: 7/1/16-7/1/17

Investigator status: Co-I (McGregor, K. PI. CDA2)

0956W. U.S. Department of Veterans Affairs, Rehabilitation Research & Development Service.

Title: Effects of Exercise Intervention on Aging-related Motor Decline

Amount: $913,522

Effort: 0.5 Calendar months (gratis contribution)

Dates: 1/1/13-12/31/17

Investigator status: Co-PI

Title: BrainModes 2015: Educational Course and Workshop

University Research Service and Administration (URSA). Georgia State University, Atlanta, GA.

Amount: $3,000

Date: 12/2015

Investigator status: Co-PI (with Ghovanloo, M)

NIH UL1TR000454. National Center for Advancing Translational Sciences of the NIH. Health Innovation Program

Title: Accelerating Upper Limb Rehabilitation in Stroke Patients by Engaging Synchronous Tongue and Wrist Motion

Amount: $49,994

Effort: 01.2

Date: 8/13-9/15

Investigator Status: PI

N07-FY13Q1-S1-P00621. U.S. Department of Veterans Affairs- Office of Rural Health VISN 7

Title: Expanding stroke telerehabilitation services to rural veterans

Amount: $1,502,466

Effort: 1.2 calendar months

Dates: 11/1/2012-9/31/2015

Investigator status: Co-I (PI: Crosson)

U.S. Department of Veterans Affairs, Rehabilitation Research & Development Service

Title: Age-Related Changes in Cortical Network Function

Amount: $200,000

Effort: 0.5 Calendar months

Dates: 6/13-5/15

Investigator Status: PI

5I21RX000561 (B7676-P)- U.S. Department of Veterans Affairs, Rehabilitation Research & Development Service

Title: Brain Activation in Humans

Amount: $200,000

Effort: 0.6 calendar months

Dates: 2/1/13-3/31/15

Investigator status: Co-I

1U01NS056256 NIH-R01 National Institute of Neurological Disorder and Stroke (NINDS) [Winstein, PI]

Title: Interdisciplinary Comprehensive Arm Rehabilitation Evaluation

(I-CARE) for Stroke Initiative

Amount: $12M

Role: Subcontract

Effort: 1.2 Calendar months

Dates: 5/08-6/14

Investigator Status: site-PI (Koeneman, PI)

VA Innovation Initiative’s (VAi2) Industry Innovation Competition

VA118-10-RP-0418 (10,000 submissions only 36 selected)

Title: Field Test of Stroke Telerehabilitation

Amount: $782,696

Effort: 0.6 calendar months

Role: subcontract

Dates: 10/11-9/13

Investigator Status: Co-Inv (Alexander, PI)

U.S. Department of Veterans Affairs, Rehabilitation

Title: Right Place Rehabilitation

Amount: $319,000

Role: co-investigator

Dates: 10/1/13-9/30/13

Investigator status: site-PI

R01 NS058755 (Kleim and Cramer, co-PI)

Title: Genotype and Experience-Dependent cortical plasticity (ICAREGEN)

Amount: $2,000

Effort: 0.2 calendar months

Dates: 8/1/11- 7/31/13

Investigator status: Co-Inv

National Center for Medical Rehabilitation Research (NCMRR)[Nichols, PI] 5T32HD055180-03

Title: Training Movement Scientists: Focus on Prosthetics and Orthotics

Amount: $1,438,931

Effort: 1.2 Calendar months (gratis contribution)

Dates: 5/08-6/13

Investigator status: PI

1I01RX000421-01. U.S. Department of Veterans Affairs, Rehabilitation Research & Development Service.

Title: Effects of sympathetic nerve activity on cortical excitability during a hand motor task

Amount: $200,000

Effort: 4.8 Calendar months

Dates: 10/10-9/12

Investigator status: PI

Emory University School of Medicine, Comprehensive Neurosciences Center

Title: Human studies of NR2C-selective partial agonists at the glycine site of the NMDA receptor

Amount: $25,000

Effort: 0.25 calendar months

Dates: 10/10-12/11

United States Department of Veterans Affairs. Large equipment grant. MagVenture rTMS, Magstim tDCS.

Amount: $265,000

Date: 7/2011

Investigator status: Co-Inv, Emory Site PI

NIH-R01 National Institute of Neurological Disorder and Stroke (NINDS) R01 NS059909-01A2 [Cramer, PI]

Title: Motor recovery after stroke: a multi-site genetic study

Amount: $690,000 direct costs of main grant

Effort: 1.2 Calendar months (allocated on a site, per patient basis)

Dates: 5/09-11/11

Investigator status: Co-Inv, Emory (Traynelis, PI)

The Georgia Tech/Emory Center (GTEC) for the Engineering of Living Tissues and the Atlanta Clinical and Translational Science Institute (ACTSI)

Title: The Role of NMDA Receptors in Motor Learning in Humans Recovering from Stroke and Brain Injury

Amount: $200,000

Effort: 0.2 Calendar months

Dates: 10/08-10/10

Investigator status: Co-PI (with M. Shinohara)

The Atlanta VAMC Rehabilitation Research R&D Center of Excellence

Title: Effects of visual feedback and sympathetic nerve activity on cortical excitability during a hand motor task

Amount: $20,000

Effort: 0.5 Calendar months (gratis)

Dates: 11/08-11/09

Investigator status: Co-Inv (Bauer-Wu, PI)

The Robert W. Woodruff Health Sciences Center Fund

Title: Neural Substrates of Mindfulness Meditation in Cancer Patients Undergoing Stem Cell/Autologous Bone Marrow Transplant

Amount: $250,000

Effort: 0.2 Calendar months

Dates: 9/1/07-12/31/09

United States Department of Veterans Affairs. Large equipment grant. FMRI-compatible 16 channel EMG.

Amount: $65,000

Date: 5/2009

Investigator status: PI

B4657P

United States Department of Veterans Affairs Merit Review

Title: Improving Rehabilitation by Magnetic Brain Stimulation

Amount: $100,000

Effort: 0.2 Calendar months

Dates: 4/1/07-3/31/09

Investigator status: PI

NIH R21 AT002138-01

Title: Mental Imagery to Reduce Motor Deficits in Stroke

Amount: $680,000

Dates: 9/04-6/30/08

Investigator status: PI

Afferent Corporation

Title: Effects of Stochastic Resonance Sensory Stimulation on Learning a Precision Grip Force Tracking Task

Amount: $98,000

Dates: 10/06-6/08

Investigator status: Co-Inv

NIH R21 HD045514-01 (PI: Jay L. Alberts, Cleveland Clinic Foundation)

Title: Air Muscle and Task Practice in Upper Limb Stroke Rehab

Amount: $380,000

Dates: 10/04-9/06

Investigator status: Co-Site PI

Sub-contract from Wake Forest University’s Multi-Center Research Grant, NIH-NICHHD HD R01 HD40984

(Grant PI, D. Good, Emory Sub-Contract PI: A. Butler, K. Sathian)

Title: Motor map plasticity in constraint therapy for stroke

Amount t: $945,198

Dates: 5/01/02 – 07/01/05

Investigator status: Co-Inv

Emory Center for Complementary and Alternative Medicine NIH 5P30AT000609-04 (co-PI. Delong and Wolf)

Title: Elucidating Neurobiological Basis of rTMS with fMRI: Towards Understanding and Optimizing rTMS as an Alternative Treatment of Neurodegenerative Disease

Amount: $35,000

Start date: 7/01/04-7/05

Investigator status: Co-Inv

Emory University Center for Research on Complementary and Alternative Medicine in Neurological Diseases (CAM), NIH NCCAM 5P30AT00609 (Mahlon Delong PI, Steve Wolf Co-PI)

Developmental Research Grant (PI: A. Butler)

Title: Mental motor imagery to reduce motor deficits in stroke

Amount: $35,000

Dates: 11/2002 – 11/2003

Investigator status: Co-Inv

Atlanta VA Rehabilitation Research & Development Grant, Developmental Project Grant- 508-D35012 (PI: A. Butler)

Title: Mental imagery to reduce motor deficits in stroke: fMRI approach

Amount: Total Costs: $ 20,000

Dates: 09/02- 09/03

Investigator status: Co-Inv

Deutsche Forschungsgemeinschaft (DFG)Sonderforschungsbereich (SFB) 194-A9, Department of Neurology, Heinrich-Heine University, Duesseldorf, Germany, $20,000 Salary, 1999-2001

Ruth L. KirschsteinNIH Post-Doctoral Fellowship in Physical Therapy (NCHHD 5T32HD007441-05, Elizabeth Protas, P.I.), School of Physical Therapy, Texas Woman’s University, Houston, Texas, $28,800 Salary, $500 travel, $800 research funds, 1996-1998.

NIH National Research Service Post-Doctoral Fellowship Interdisciplinary Research Training Program on Aging (NIA 5T32AG000214-05, Donald Heistad, P.I.). University of Iowa Center on Aging, $19,600 Salary, $500 travel, $400 research funds, 1995-1996.

NIH National Research Service Pre-Doctoral Fellowship Interdisciplinary Research Training Program on Aging (NIA 5T32AG000214-05, Donald Heistad, P.I.). University of Iowa Center on Aging, $10,000 Salary, $500 travel, $400 research funds, 1993-1994, 1994-1995.

National Academy of Sciences/Sigma Xi Grants-in-Aid-of Research Award, Funded for research in the amount of $1,500, 1994.

University of Iowa Student Association Research Grant Committee Award. Funded for research in the amount of $1,000, 1995

University of Iowa Student Association Research Grant Committee Award. Funded for research in the amount of $850, 1994.

1. **Unfunded**

Investigator Status: Co-I (PI: Hall, J. Morehouse College, Dixon, D: GSU)

NIH: U54 Specialized Center

Title: Southeastern Cooperative for Enhancing Diversity (SCEED)

Effort: gratis

Date: *unfunded*

Investigator status: Co-Investigator

NIH-R01 National Center for Medical Rehabilitation Research (Alberts, PI Cleveland Clinic Foundation)

Title: Air Muscle and Task Practice in Upper Limb Stroke Rehab

Amount: $680,000

Effort: 1.2 calendar months

Dates: *unfunded*

Investigator status: PI

Allergan Corporation

Title: Supplemental project to the evaluation of intramuscular injections of BOTOX® (Botulinum Toxin Type A) in combination with rehabilitation therapy for the treatment of wrist and forearm-hand muscle over-activity in post-stroke patients (BOTOX® “Active” Study)

Amount: $348,674

Effort: 2.4 calendar months

Dates: *unfunded*

**Formal Teaching:**

**a. Medical Student Teaching**

**Research Mentor/advisor.**  Co-advisor on research project, Emory University School of Medicine. Department of Rehabilitation Medicine.“Determining intra-subject and inter-subject reliability of TMS maps of the extensor digitorum communis in stroke survivors”, Provided guidance to 1st year Medical student (Shannon Kahn) on summer project. Summer 2002.

**Summer research mentor.** Co-advisor on research project, Emory University School of Medicine. Department of Rehabilitation Medicine “FES and upper limb rehabilitation in stroke.” Provided guidance to 1st year Medical students Kim Bogard (Emory) and Matthew Steel (MCG). Summer 2007.

**b. Graduate Program**

**Georgia State University Graduate Program in Neuroscience**

**Lecturer.** Neuroplasticity – (Neuro8790). Course Director Maris Parent. March 6, 2015

**Lecturer.** Career is Neuroscience – (Neuro4960). Course Director Laura Carruth. October 31, 2014

**Georgia State University Department of Physical Therapy**

**Lecturer.** Movement Sciences I – (PT7615). Course Director Aimee Reiss. October-December 2013.

**Lecturer.** Physical Therapy Management of Neuromuscular Disorders V – (PT8730). Course Director Anne Lorio. Nov. 2012-

**Lecturer.** Research III - Synthesis– (PT8600). Co-mentor (with G. Warren) for Lisa Stewart. Course Director Gordon Warren. Jan-May. 2013

**Lecturer.** Research III - Synthesis– (PT8600). Mentor Alyssa Walz. Course Director Gordon Warren. Jan-May. 2013

**Faculty Mentor.** Systematic Meta-analysis– (PT8500). Mentor Lauryn Daniel, Vernisha Bhakta, Peggy Coats. Course Director Gordon Warren. Jan-May. 2013

**Emory University Division of Physical Therapy**

**Course Director**. Clinical Research I and II (DPT915). The course applies fundamental concepts and methods of the scientific inquiry process through active participation in a research project. 2003-

**Lecturer.** Motor Learning – (DPT805). The course is an introduction to motor learning and performance. Provided lecture on the changes is on-, off-line learning and retention following non-invasive brain stimulation. June 2011-.

**Lecturer.** Medical Genetics – (DPT760). The course is a survey of medical genetics. Provided lecture on the use of genetic screening and prediction of motor disorder in stroke populations. 2011-.

**Lecturer**. Health Systems Management IV (DPT835). This course provides the opportunity for the student to demonstrate competency in current, administrative and consultative practice. 2003-present.

**Lecturer.** Analysis of Dysfunction III – (PHT543C) – Excitability. The course described the Analysis of Dysfunction and Clinical Measures. Including the study of symptoms and signs associated with homeostatic problems/diseases. 2001-2009.

**Lecturer.** Creative Alternative Interventions for Treatment – (PHT697r). The course exposes DPT students to novel and creative interventions designed to overcome movement limitations and foster enhanced quality of life. 2005-2009.

**Training programs**

**Lecturer.** Special Topics Research Group (PSYC730R). Spring 2005-present. Emory College Department of Psychology. Course discussed research project design, methodology, software, and manuscripts relevant in the field of fMRI.

**Lecture**r- Biology of Movement Control II, (IBS708). Spring 2005. Inter Biological Sciences. The course involves discussions of supraspinal central nervous system areas and circuits thought to be involved in the control of movement. The course involves discussions of theories of motor control and learning, and examples of disordered movement control. Course director. Dr. Richard Segal.

**Lecturer**. Methods in Cognitive Neuroscience: ERP and FMRI. Spring. 2003. Emory University Department of Psychology. Provided two lectures.

**Emory University PM& R Residency program**

Co-Instructor. PM&R resident’s research seminar. 2003-2004. Along with Dr. Nancy Kutner, I prepared syllabi, and seminar content.

1. **Other categories**

GBS691. Leading with Integrity. Goizueta School of Business. Emory University. Integrity challenges in healthcare organizations. Course Director Peter Topping, Ph.D. Fall 2011.

NBB425. Co-Instructor. Brain Imaging. Neuroscience and Behavioral Biology. Emory College. Fall 2001, Spring 2002. Spring 2008, 2009. Emory University College of Arts and Sciences. Prepared lecture, graded exams for graduate and undergraduate students for course entitled, Co-instructed with Dr. Lori Marino.

APPH 6216. Rehabilitation Research Seminar. Fall 2009. The Georgia Institute of Technology. School of Applied Physiology. Provided four lectures on TMS and advanced brain imaging techniques to graduate students in the Prosthetic and Orthotic program. Course director Dr. Richard Nichols.

APPH 8803. Methods in Human Neuroimaging. Fall 2010. The Georgia Institute of Technology. School of Applied Physiology. Provided lectures on NIRS and advanced brain imaging techniques to students in Applied Physiology. Sept. 2010. Course Director Lewis Wheaton, Ph.D.

BUS 449G, 649G and 649PG. Fall. 2010. Marketing Strategy. Goizueta School of Business. Emory University. Assisted in the design of a MBA class marketing project to implement a marketing and sales strategy for start-up company developing an in-home teletherapy service. Course Director Ashish Sood, Ph.D.

NBB 401. Perspectives in Neuroscience and Behavioral Biology. Fall 2010. Emory University. Emory faculty speak about their research and how they came to this point in their career. Course Director Kristen Frenzel, Ph.D.

BMED 4600,4601. Biomedical engineering Capstone Design Project. Brain-Robotic device interface. Phil Yao, Savannah Cookson, Jordan Rakes, Desiree Van Haute. The Georgia Institute of Technology. Fall/Spring 2010-2011.

BMED 4600. Biomedical engineering Capstone Design Project. Tongue Drive-Robotic device interface. Dixita Patel, Armin Jamaleddin, Devon King, Upekha Amanda. The Georgia Institute of Technology. Fall 2012.

**Supervisory Teaching:**

1. **Ph.D. students directly supervised:**

**Dissertation committee member.** Zhenxuan (James) Zhang, Ph.D. Title: *Development and evaluation of a tongue operated robotic rehabilitation paradigm for stoke survivors with upper limb paralysis*. School of Electrical and Computer Engineering. The Georgia Institute of Technology. Atlanta, GA. 2016-2020. Current position: computer engineer Microsoft.

**Dissertation committee member.** Sahil Bajaj, Ph.D. Title: *Motor-execution network activity following stroke and rehabilitation*. Department of Physics and Astronomy. Georgia State University. Atlanta, GA. 2014-2015. Current position: Director, Multimodal Clinical Neuroimaging Laboratory (MCNL). Boys Town National Research Hospital. Omaha, NE.

**Dissertation committee member.** Vasiliy Buharin, Ph.D. Title: *Task dependent effects of baroreceptor unloading on motor cortical and corticospinal pathways*. School of Applied Physiology. The Georgia Institute of Technology. Atlanta, GA. 2010-2013. Current position: signal processing engineer Boston Scientific.

**Dissertation external reader.** Louise Claire Bannister, Ph.D. OT. School of Occupational Therapy, LaTrobe University, Melbourne Australia. 2011-2012. Current position: Faculty Dept. of Occupational Therapy.

**Dissertation committee member.** Linda Harley, Ph.D. Title: *Motor Learning and its transfer during bilateral arm reaching*. School of Applied Physiology. The Georgia Institute of Technology. Current position: Research Scientist, Georgia Tech Research Institute, Georgia Institute of Technology, Atlanta, GA 2006-2011.

**Dissertation external reader.** Ettie Ben Shabat, Ph.D. OT. Title:

**Dissertation committee member.** Larisa Reed Hoffman, Ph.D. PT,
Title: *Functional and cortical changes in individuals with chronic cervical spinal cord injury: a comparison of uni- versus bimanual training and somatosensory versus muscle stimulation.* University of Miami. 2006-2007. Current position: Assistant Professor Regis University, Boulder, CO.

**Dissertation committee member**. Linda Confaloneiri, Ph.D., Title: *Brain activation in primary motor and somatosensory cortices during motor imagery correlates with motor imagery ability in stroke patients.* University of Milan, Italy 2005-2007. Current position: Research Scientist, University of Milan Bicocca, Milan, Italy.

**Dissertation committee member.** Brian R. Cornwell Ph.D. Department of Psychology. Effects of disrupting somatosensory cortical activity on facial emotion recognition: A transcranial magnetic stimulation study. 2003-2004. Current position: Research Scientist, Mood and Anxiety Disorder Program, National Institute of Mental Health, National Institutes of Health, Bethesda, MD.

1. **Post-doctoral fellows directly supervised:**

**Advisor** Yi-An Chen, OT, Ph.D. 2017-2018. University of Southern California. Current position: Assistant Professor, Department of Occupational Therapy. Georgia State University. Atlanta, GA

**Advisor** Pawan Basati, MD. 2008-2012. St. Christopher’s IMD (Iba Mar Diop) College of Medicine Luton, United Kingdom. Current position: family practice resident Miami, FL

**Advisor** Mingguo Qiu, MD. 2008 and 2013. Current position: Faculty Department of medical informatics and medical image, College of Biomedical Engineering and Medical Imaging, Third Military Medical University, Chongqing, China

**Advisor** Soo-Kyung, Bok, MD. 2006. Dept. Rehabilitation Medicine, Konyang University Hospital Metropolitan City, Korea. Practicing Physician.

**Advisor** Min-Wook Kim, MD, Ph.D. Feb. 2004-July 2005 Department of Rehabilitation Medicine. Our Lady of Mercy Hospital, Catholic University #605 Bupyong 6 Dong Bupyong-Incheon, 405-720, Korea. In Private Practice.

**Advisor** Si-Woon Park, M.D, Ph.D Dec. 2002- June 2003. National Rehabilitation Hospital, Seoul, Korea. Supervised Dr. Park in projects involving Complementary and Alternative Medicine and Stroke Rehabilitation. Practicing physician.

1. **Residency Program**

**Research Mentor/advisor**.PM & R Resident John Keel. 2003. Co-advisor on research project,“Transcranial magnetic stimulation as a possible therapeutic modality” Current position: Faculty Emory School of Medicine.

**Research Mentor/advisor**.PM & R Resident Scott Corneal. 2001-03.

Co-advisor on research project,“Assessing TMS maps of the abductor pollicus brevis in two different electrode arrays” Private Practice, Integrative Pain Solutions, St. Augustine, FL.

1. **Master’s student supervised**

**Thesis project co-advisor**. Muluken Gebremariam. Department of Computer Science. Georgia State University. (Advisor Rajshekhar Sunderraman). 2016-17. Current position: Software engineer Squarespace.

1. **Other**

**Emory University School of Medicine Summer Science Academy (SSA).** The mission of SSA was to promote the presence of underrepresented minority students in science by providing high school students with the opportunity to explore complex scientific topics and to investigate science in action.July 2014.

**AMSU Bridges to Baccalaureate Program.** Mentored anAtlanta Metropolitan State College student in the GSU B2B summer program. July 2014.

**Joe Taylor Business Case Competition.** Robinson College of Business, Georgia State University. May 2014.

**Capstone Project. Doctor of Nursing Practice.** Gerarld Hobbs. A Community Health Strategy to Reduce Hospital Readmissions. NURS 8996. Capstone Implementation. 2014-2015

**High School Student mentor.** Aditya Sood. Sequential Visual Isometric Pinch Task. Summer 2014.

**Undergraduate Research Mentor.** Noareen Ahmed. 2012-13. Undergraduate Neuroscience and Behavioral Biology Student. Emory University. Project: Meta-Analysis of guided mental imagery.

**Undergraduate Research Mentor.** Michael Cold. 2011-13. Undergraduate Computer Science Student. Emory University. Project: Sequential Visual Isometric Pinch Task

**Undergraduate Research Mentor.** Anwar Ferdinand. 2011-12. Undergraduate Neuroscience and Behavioral Biology Student. Emory University. Project: Sequential Visual Isometric Pinch Task.

**Undergraduate Research Mentor.** Mayur Patel, Scholarly Inquiry and Research at Emory (SIRE). 2011-12. Undergraduate Neuroscience and Behavioral Biology Student. Emory University. Project: Sequential Visual Isometric Pinch Task.

**Undergraduate Research mentor**. William McDonald. Bio499R: Independent Research. Undergraduate Biology student, Emory University. 2011-2012. Project: Sequential Visual Isometric Pinch Task.

**Goizueta Business School Alumni Mentor Program. Emory University.** Adam Sutton. Provide one-on-one guidance, career development and networking opportunity to MBA student. 2011-2012.

**Mentorship Committee**. Career Development award. Keith McGregor, Ph.D.2010-2012**.** Title:Effects of Physical Fitness on Neurological markers of aging. D7174M. U.S. Department of Veterans Affairs. Brain Rehabilitation Research Center (BRRC), Malcolm Randall VAMC. Gainesville, FL

**Mentor.** Helene Smith-Gabai,Research Residency Course. Provide research experience as part of Doctor of Philosophy (Ph.D.) in Occupational Therapy curriculum. Division of Health Professions, College of Allied Health and Nursing, Department of Occupational Therapy. Nova Southeastern University (NSU), April-Dec. 2010.

**Comprehensive exam committee member.** Vasiliy Buharin, School Applied Physiology, The Georgia Institute of Technology. Feb. 2010.

**CORRT mentor**– Jeanne Charles, Ph.D. PT. Comprehensive Opportunities for Rehabilitation Research Training (CORRT). Rehabilitation Research Career Development Program (K12) National Center Medical Rehabilitation Research, National Institute of Child Health and Human Development / National Institute Neurological Disorders and Stroke, National Institutes of Health (K12 HD055931). Total Direct Costs $4.6 million. 2007-2010.

**Research mentor** Anwar Serhan, OT, Manama, Bahrain. Humphrey Scholar Program at the Rollins School of Public Health, Emory University. 2006-2007.

**Host to visiting scientist.** Warren G. Darling, Ph.D. University of Iowa, Department of Exercise Science. September 2004-Dec. 2004.

**Research mentor**. Tara Tolbert, BS. Undergraduate Neuroscience and Behavioral Biology student. Emory University. 2007-2008.

**Research advisor** (Alyssa Walz). 2013-2014.Department of Physical Therapy. Advisor on TDS-HM project. Georgia State University.

**Research advisor** (K. Guilkey, D. Gibson, M. Shuster, K. Hurley, E. O’Hara). 2010-2012. PHT 550B and C. Clinical Research II-IV. Advisor on research project, Emory University School of Medicine. Division of Physical Therapy.“A meta-analysis of the efficacy of anodal transcranial direct current stimulation for upper limb motor recovery in stroke survivors.”

**Research advisor** (H. Brown, K. Cleveland, D. Fennerty, J. Wallace, E. Wigfall). 2009-2011. PHT 550B and C. Clinical Research II-IV. Advisor on research project, Emory University School of Medicine. Division of Physical Therapy.“Use of NIRS to assess Visuomotor learning”

**Research advisor**. (C. Henline, K. Johnson, C. Lawless) 2008-2010. PHT 550B and C. Clinical Research II-IV. Advisor on research project, Emory University School of Medicine. Division of Physical Therapy.“Attentional ability in stroke survivors”

**Research advisor**. (A. Fidler, J. Cazaux, N. Lefkov, J. Jansen) 2007-2009. PHT 550B and C. Clinical Research II-IV. Co-advisor on research project, Emory University School of Medicine. Division of Physical Therapy.“The MIQ-RS validity and reliability in stroke”

**Research advisor**. (K. Arnold, A. Charbeneau) 2005-2007.

PHT 550B and C. Clinical Research II-IV. Co-advisor on research project, Emory University School of Medicine. Div. of Physical Therapy.“Improving Rehabilitation by Magnetic Brain Stimulation”

**Research advisor**. (K. Pepper, S. Sydnor) 2005-2008.

Div. of Physical Therapy.“The relationship between lesion size, location and upper extremity motor function in stroke patients following Constraint Induced Therapy”

**Research advisor**. (S. Weinstein, G. Campana, D. Struys, T. Mueller) 2001-03. Co-advisor on research project, Division of physical therapy.“Determining intra-subject and inter-subject reliability of TMS maps of the extensor digitorum communis in able-bodied adults”, Provided guidance to four DPT students on thesis project

**Research advisor** Nursing 761. Jennifer Klinedinst, PhD. January-May 2005. Overall purpose was to gain a better understanding of the human brain, stroke, and the effects of stroke on the whole person using neuroimaging techniques.

**foreBrain mentor** Charles Gibson. Summer 2003. Sponsored by the Center for Behavioral Neuroscience. foreBrain is a summer program to introduce minorities and women undergraduate students to neuroscience. This program allowed an undergraduate student to conduct supervised research with a faculty mentor. The student received training in the research methods applicable to their research plan, analyzed data and created a written and oral presentation of their results. At the end of the summer, the student participated in a formal research symposium.

**SURE mentor.** Jean Ko. Summer 2003. Advisor for the **S**ummer **U**ndergraduate **R**esearch Program at **E**mory (SURE). SURE was funded in part by a grant from the Howard Hughes Medical Institute. This program allowed an undergraduate student to conduct supervised research with a faculty mentor. The student received training in the research methods applicable to their research plan, analyzed data and created a written and oral presentation of their results. At the end of the summer, the student took part in a formal research symposium.

**Teaching Assistant**. Spring 1997-98. Texas Woman's University School of Physical Therapy. Prepared lab, instructed students, and graded exams for Clinical Neuroscience Laboratory for entry level master's students (PT5024). Gained experience in quickly establishing a firm understanding of an allied field, and in passing that understanding on to others. Gained experience in leadership, and in oral—as well as written—presentation of ideas.

**Teaching Assistant**. Fall 1996-97. Texas Woman's University School of Physical Therapy. Prepared lab, instructed students, and graded exams for Gross Human Anatomy for entry level master's students (PT5015). Gained experience in quickly establishing a firm understanding of an allied field, and in passing that understanding on to others. Gained experience in leadership, and in oral—as well as written—presentation of ideas.

**Teaching Assistant**. Fall 1993. University of Iowa Department of Exercise Science. Principal lecturer for 70 undergraduate students in Gross Human Anatomy course (27:053). Responsibilities included defining the course content and independently devising measures of student achievement.

**Teaching Assistant**. 1988-1993. University of Iowa Department of Exercise Science. Instructed students in lecture, prepared lab, and graded exams for pre-medicine students in Gross Human Anatomy course (27:151).

**Teaching Assistant**. Summer 1991. University of Iowa Department of Exercise Science and College of Medicine. Prepared lab, instructed graduate and undergraduate students, graded exams for Gross Human Anatomy for Physician Assistants and Allied Health Professionals (27:253).

**Lectureships, Seminar Invitations, and Visiting Professorships:**

“Telestroke Robotic Rehabilitation”. 9th Annual Global Partnership for Telehealth. Jekyll Island, GA. March 22, 2018.

“Increasing Access to Cost Effective Home-Based Rehabilitation for Rural Veteran Stroke Survivors” Department of Veterans Affairs. National Stroke Quality Improvement Network (SQUINT). National WebEx. June 6, 2017

“An update on interprofessional collaborative education.” Southern Regional Education Board (SREB). Atlanta, GA Nov. 17, 2015.

“Expanding Tele-rehabilitation of Stroke Through In-Home Robot-Assisted Therapy” Clinical Research in Georgia conference. Atlanta, GA. December 4, 2013

“Expanding Stroke Rehabilitation” VA Office of Rural Health. National Webinar. Sept. 2013.

“Innovation in Rehabilitation Research” Department of Allied Health Sciences. University of North Carolina-Chapel Hill. May 2013.

Career Seminar. Undergraduates in Biology. Georgia State University. Department of Biology, Atlanta, GA. April 19, 2013

“Entrepreneurship Day” Leader Break-out panel on Health Professions. Georgia State University, Robinson College of Business. April 6, 2013.

“Stroke Tele-rehabilitation for U.S. Veterans” Manufacturing Related Disciplines Complex (MRDC). Georgia Institute of Technology, Atlanta, GA. Nov. 12, 2012

“Improving Access and Quality While Decreasing Cost: A Field Test of Stroke

Telerehabilitation for U.S. Veterans” Birmingham/Atlanta GRECC Neuromuscular Rehabilitation and Aging Research. University of Alabama Birmingham Center for Aging. Birmingham, AL. August 27-28, 2012.

“Seven Tenets of Brain Plasticity” Wesley Woods Senior University. Emory University, Atlanta, GA. May 2012.

“Rehabilitation robots in the home.” GTRI technical series: Home Health Research. Georgia Institute of Technology. Atlanta, GA. March 2012.

“White matter integrity but not BOLD response predicts motor function in patients with stroke” Arizona School of Health Sciences. A.T. Still University. Mesa, Arizona. Nov. 2011.

“Thoughts and visions for excellence in a Department of Physical Therapy and Rehabilitation Sciences: Tradition and Innovation. Drexel University, Philadelphia, Pennsylvania. Oct. 2011.

“Exploring the future of physical therapy” Arcadia University, Glenside, Pennsylvania. Sept. 2011.

“Physical Therapy and Society Summit (PASS)” Exploring the Future of Physical Therapy Symposium. Emory Division of Physical Therapy Alumni Weekend. Emory University, Atlanta, GA. March 2011.

“CIMT produces clinically relevant improvements and increased motor map area in patients 3-9 months post stroke”. Visiting Professor. National Key Lab of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, People’s Republic of China Dec. 2010

“Non-invasive Measurement of the Activation of the Cerebral Cortex” Visiting Professor. National Key Lab of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, People’s Republic of China Dec. 2010

“Brain plasticity after stroke” Nanlou Rehabilitation Department, General Hospital of People’s Liberation Army. Beijing, People’s Republic of China. December 2010.

“STROKEGEN.” Emory University School of Medicine, Department of Physical Medicine and rehabilitation. Grand Rounds. Atlanta, GA. Nov. 2010.

“Health: the inside view”, Division of Health Sciences, University of South Australia, Adelaide, New South Wales, Australia. Sept. 2010.

“Genetic influences on upper limb stroke rehabilitation and recovery.” Annual Conference. Winning Strategies: Playing the Neurologic Rehabilitation Game. Center for Rehabilitation Services. North Fulton Regional Hospital. Roswell, GA. Sept. 2010

“BDNF Val66Met Polymorphism influence motor system function in the human brain.” Emory University School of Medicine, Physical Medicine and rehabilitation residency program. Emory University. Atlanta, GA May 2010.

“CIMT produces clinically relevant improvements and increased motor map area in patients 3-9 months post stroke.” School of Biological and Health Systems Engineering (SBHSEO), Ira A. Fulton, School of Engineering. Arizona State University, Tempe, AZ. April 2010.

“White matter integrity is a stronger predictor of motor function than BOLD response in patients with stroke.” School of Physiotherapy. University of Otago. Dunedin, N.Z. March 2010.

“Motor recovery after stroke: a multisite genetics study” Department of Rehabilitation Medicine. Emory University, Atlanta, GA. March 2010.

“BDNF Val66Met Polymorphism influences motor system function in the human brain.” Emory MBNA Stroke Center. Didactic stroke seminar. Emory University, Atlanta, GA Feb., 2010.

“White matter integrity but not BOLD response predicts motor function in patients with stroke.” Moss Rehabilitation Institute. Philadelphia, PA. February 2010

“Building a Research Enterprise in a School of Health & Rehabilitation Sciences:  Traditions and Innovations” Indiana University-Purdue University at Indianapolis. Indianapolis, IN January 2010.

“Brain activation during motor imagery.” Grand Rounds, Emory University Department of Rehabilitation Medicine. Emory University, Atlanta, GA July 2009.

“Cortical plasticity in stroke patients”, University of Istanbul. College of Physical Therapy and Rehabilitation. Istanbul, Turkey. April 2009

“Neurorehabilitation and Neuroplasticity” University of Sydney, Faculty of Physiotherapy. Sydney, Australia. November 2008.

Interdisciplinary Stroke Conference. “Imaging of recovery following stroke” Emory University Department of Neurology. Atlanta, GA. September 2008.

Video-teleconference lecture. “Using TMS as a brain mapping tool”, School of Physiotherapy, the University of Otago, New Zealand. July 30, 2008

National Youth Leadership Forum, “Today’s Physical Therapist”. Emory University, Atlanta, GA. Nell Hodgson Woodruff School of Nursing, July 1, 2008.

Australian National Stroke Research Institute, “Constraint induced movement therapy results in lasting changes in brain physiology”, Melbourne, Australia June 17, 2008.

Auckland Neuroscience Network “Dosing of rTMS to enhance motor function”. The University of Auckland. Auckland, New Zealand. June 13, 2008.

Stroke Foundation of New Zealand, “CIMT reduces impairments following stroke” Auckland, New Zealand June 12, 2008

Applied Science Program and Brain Health and Repair Research Centre. University of Otago. “Changes in Brain physiology related to motor task performance following stroke.” Dunedin, New Zealand, June 10, 2008.

Emory MBNA Stroke Center. Didactic stroke seminar. Emory University, “Stroke rehabilitation research” Atlanta, GA May 2008

Boston University Sargent College of Health and Rehabilitation Sciences, “Neuroplasticity and stroke recovery” Boston, MA April 2008

Department of Exercise Science, The University of South Carolina, “Plasticity following CIMT” Columbia, SC March 2008.

School of Applied Physiology, the Georgia Institute of Technology. “Constraint-induced Movement Therapy results in increased motor map area in subjects 3-9 months after stroke.” Atlanta, GA January 2008

Department of Physical Therapy and Rehabilitation Science, The University of Iowa, “Constraint-Induced Therapy After Stroke Results in Lasting Changes in Brain Physiology, Related to Motor Task Performance.” Iowa City, IA Oct. 2007

Department of Physical Therapy and Movement Sciences, Fienberg School of Medicine, Northwestern University. “Constraint-Induced Therapy After Stroke Results in Lasting Changes in Brain Physiology, Related to Motor Task Performance.” Chicago, IL June 2007

Annual Virginia Lee Franklin Nursing Conference. “Evidence based stroke rehabilitation.” Atlanta, GA. March 2007

Annual meeting of the Georgia Occupational Therapy Association “Constraint Induced Therapy – Research” Atlanta, GA. October 2006.

Annual meeting of the Tri-State Stroke Network “Opportunity’s in Stroke Rehabilitation.” Chapel Hill, NC. May 2006.

National Healthcare Group “Imaging recovery of function after stroke: implications for rehabilitation”, Tan Tock Seng Hospital, Singapore, March 2004.

“Clinical Correlates of Neuroimaging: Cross-study comparisons” First International Workshop on Neuroimaging and Stroke Recovery. Columbia University, New York. February 2004.

“Integration of visual and proprioceptive information during reaching: A PET study.”

Emory University, Department of Rehabilitation Medicine, Atlanta, GA. March 5, 2001.

Department of Kinesiology, Katholieke Univ., “The Neural Bases of Reaching for Remembered Targets: The Effects of Kinesthetic vs. Visual Cueing for Left and Right Hemispace,” Leuven, Belgium, January 23, 2001.

**Invitations to National or International Conferences:**

"Increasing Access to Cost Effective Home-Based Robotic Telerehabilitation for Stroke Survivors" Butler AJ, Housley SN, Garlow A, Ducote K, Howard A, Thomas T, Wu D, Richards, K. ASAHP. San Antonio, TX Oct. 2017

“Clinical Decision Making and Neuroplasticity Promotion in Neurological Disorders: Research and Applications of Neuroimage and Electrophysiology.” College of Medicine, National Taiwan University, Taipei, Taiwan. May 17th, 2015.

“Using Technology to Support Caregivers of Older Adults with Physical and/or Cognitive Impairments” American Society of Aging (ASA) 2014 Aging in America Conference. San Diego, CA. March 14, 2014

“Diffusion Tensor Imaging, Functional MRI and motor response after a stroke” American Academy of Physical Medicine & Rehabilitation. Annual Meeting. Atlanta, GA. Nov. 2012

“Brain Power” American Physical Therapy Association: Combined Sections Meeting. New Orleans, Louisiana. Feb. 12, 2011

“Brain activations in primary motor cortex during motor imagery correlates with motor imagery ability in stroke patients.” Keynote speaker. Neurosymposium on the Neurological Upper limb. Auckland, New Zealand. May 15, 2009

“Topics in Stroke Rehabilitation” Integrated Stroke and Cerebrovascular Conference 2009. Charleston, SC. March 14, 2009

Physiotherapy Week, “Evidence based physiotherapy: CIMT and its application”, Manama, Bahrain, October. 2007

APTA combined sections meeting, “Avenues to understanding and inducing neuroplasticity, what can we learn from Transcranial Magnetic Stimulation?"” Boston, MA Feb. 2007

The 3rd GCC International Physical Therapy Conference, “The Mutable Brain” Manama, Bahrain. Nov. 2006.

Third International Symposium on Imaging of Stroke and functional Recovery. “Constraint-Induced Therapy After Stroke Results in Lasting Changes in Brain Physiology, Related to Motor Task Performance.” Montalcino, Italy. June 2006.

State-of-the-Art Stroke Nursing Symposium. American Heart Association. “Transitioning to Rehabilitation:  Ischemic and Hemorrhagic Stroke” Kissimmee, FL Feb. 2006.

Second International Workshop on Imaging Stroke Recovery “Multisite TMS and fMRI mapping before and following Constraint induced therapy”, Hamburg, Germany. May 2005.

APTA Combined Sections Meeting. “Neuroimaging and stroke rehabilitation.” New Orleans, LA, February 2005.

Texas Physical Therapy Association 2002 Annual Conference/Student Conclave. “Task Practice in Upper Extremity Neurorehabilitation of Patients with Stroke: Theory & Application of Constraint Induced Movement Therapy and Mechanisms Revealed by Brain Mapping Techniques.” Austin, Texas. October 2002.

7th Annual Meeting of the Organization for Human Brain Mapping (OHBM), “Neural Correlates Associated with Visuo-Spatial Transformations using a Mirror.” Brighton, United Kingdom. June 2001.

31st Annual meeting of the Society for Neuroscience “Acting in peripersonal mirror space. A combined lesion and PET study,” San Diego, California, November 2001.

6th Annual Meeting of the Organization for Human Brain Mapping (OHBM), “Reaching to Remembered Targets: Comparison of visual and Kinesthetic Cueing in Left and Right Hemispace.” San Antonio, Texas, June 2000.

**Other Activities:**

**Bibliography:**

1. Research articles (clinical, basic science, other) in refereed journals:
2. **Butler, AJ**, Yue, G., and Darling, W.G. (1993) Variations in soleus H-reflexes as a function of plantarflexion torque in man. *Brain Research*, 632(1-2):95-104. PMID: 8149249
3. Darling, W.G., **Butler, AJ**, Williams, T.E. Visual perception of head-fixed and trunk-fixed anterior/posterior axes (1996). *Experimental Brain Research* 112 (1):127-134*.* PMID: 8951415
4. Darling, W.G., Rizzo, M. and **Butler, AJ** Disordered sensorimotor transformations for reaching following posterior cortical lesions (2001). *Neuropsychologia* 39 (3):237-254. PMID: 11163603
5. **Butler, AJ**, Wolf, SL. Transcranial magnetic stimulation to assess cortical plasticity: A critical perspective for stroke rehabilitation (2003) *J Rehabil Med; Suppl*. 41:20-26*.* PMID: 12817653
6. Binkofski F, **Butler AJ**, Buccino G, Heide W, Fink G, Freund HJ, Seitz RJ (2003): Mirror apraxia affects the peripersonal mirror space. A combined lesion and cerebral activation study. *Exp Brain Re*s 153:210-219.
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8. Park, SW, **Butler AJ.**, V. Cavalheiro, and S L. Wolf (2004). Changes in serial optical topography with constraint-induced movement therapy in stroke: a case study. *Neurorehabil Neural Repair* 18:95-105. PMID: 15228805
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