

Jessica Margaret Cassidy, DPT, PhD
Assistant Professor
Department of Allied Health Sciences – Division of Physical Therapy
The University of North Carolina at Chapel Hill
3028 Bondurant Hall
Chapel Hill, NC 27599-7135
jcassidy@med.unc.edu, 919.843.5774

EDUCATION

Postdoctorate Fellow – Department of Neurology, 2015-2019

Advisor: Steven C. Cramer, MD
University of California, Irvine, CA

Doctorate of Philosophy – Rehabilitation Science, Neuroscience minor, 2014

Advisor: James R. Carey, PT, PhD
University of Minnesota, Minneapolis, MN
Dissertation: *Optimization of Repetitive Transcranial Magnetic Stimulation With Priming In Chronic Stroke*

Clinical Doctorate – Graduate Program In Physical Therapy, 2009

University of Minnesota, Minneapolis, MN

Bachelor of Science – Biology & Neuroscience, 2005

University of Wisconsin, Madison, WI

PROFESSIONAL EXPERIENCE – EMPLOYMENT HISTORY

Assistant Professor – Division of Physical Therapy, The University of North Carolina at Chapel Hill, 2019-present

Physical Therapist – Gillette Children’s Specialty Healthcare, 2010-2014

St. Paul, MN

Physical Therapist – Park Nicollet Healthcare System, 2009-2010

St. Louis Park & Maple Grove, MN

HONORS

Early Career Reviewer Program, Center for Scientific Review, National Institutes of Health

Junior Faculty Development Award, University of North Carolina at Chapel Hill, 2021

UC Irvine Postdoctorate K Award Bonus, School of Medicine, 2017

Robert Newcomb Interdisciplinary Team Science Award, UC Irvine Institute for Clinical and Translational Science, 2017

UC Irvine Postdoctorate Research Symposium, TedTalk Competition 1st Place, 2016

UC Irvine Postdoctorate Research Travel Award, School of Medicine, 2016

UC Irvine Postdoctorate Fellowship Application Incentive Award, School of Medicine, 2016

Canadian Partnership For Stroke Recovery, Stroke Program In Neurorecovery (SPiN) Workshop, Vancouver, British Columbia, Canada; invited/funded attendee, 2016

University of Minnesota Student Association/Council of Graduate Students Teaching Award, 2015

University of Minnesota Student Association/Council of Graduate Students Teaching Award, 2014
Viva J. Erickson Award, Foundation for Physical Therapy, 2013-2014

Minnesota Neuromodulation Symposium Poster Award Recipient, 2013

Doctoral Dissertation Fellowship, Nominee, University of Minnesota, 2013-2014

Neuromuscular Plasticity Symposium Scholar and Travel Award Recipient,
University of Florida, Gainesville, 2012

MN-APTA Outstanding Student of the Year Award, 2008-2009

Rudy Ptak Scholarship, University of Minnesota Graduate Program in Physical Therapy, 2008

Graduate Assembly of Professional Students Association Travel Grant Recipient, 2008

PUBLICATIONS

Cramer SC, Le V, Saver JL, Dodakian L, See J, Augsburger R, McKenzie, et al. Intense Arm Rehabilitation Therapy Improves the Modified Rankin Scale Score: Association Between Gains in Impairment and Function. *Neurology*. 2021; doi:10.1212/WNL.00000000000011667.

Lui KK, Nunez MD, **Cassidy JM**, Vandekerckhove J, Cramer SC, Srinivasan R. Timing of readiness potentials reflect a decision-making process in the human brain. *Comput Brain Behav*. 2020; doi: <https://doi.org/10.1007/s42113-020-00097-5>.

Wodeyar A, **Cassidy JM**, Cramer SC, Srinivasan R. Influence of damage to the structural connectome on functional and effective connectivity in resting state fMRI. *Network Neurosci*. 2020; doi: https://doi.org/10.1162/netn_a_00160.

Liew SL, Zavaliangos-Petropulu A, Jahanshad N, Lang CE, Hayward KS, Lohse K, Juliano JM, et al. The ENIGMA Stroke Recovery Working Group: Big data neuroimaging to study brain-behavior relationships after stroke. *Hum Brain Mapp*. 2020; doi:10.1002/hbm.25015.

Cassidy JM, Wodeyar A, Wu J, Kaur K, Masuda AK, Srinivasan R, Cramer SC. Low Frequency Oscillations Are A Biomarker Of Injury And Recovery After Stroke. *Stroke*. 2020; doi:10.1161/STROKEAHA.120.028932.

Lin DJ, Cloutier AM, Eler KS, **Cassidy JM**, Snider SB, Randford J, Parlman K, et al. Corticospinal Tract Injury Estimated From Acute Stroke Imaging Predicts Upper Extremity Motor Recovery After Stroke. *Stroke*. 2019; doi:10.1161/STROKEAHA.119.025898.

Cassidy JM. Critically appraised paper: Unilateral neglect impairs functional recovery but evidence for upper limb interventions in patients with neglect is lacking [commentary]. *J Physiother.* 2019; doi: 10.1016/j.jphys.2019.07.006.

Findlater SE, Hawe RL, Mazerolle EL, Al Sultan AS, **Cassidy JM**, Scott SH, Pike B, Dukelow SP. Comparing CST lesion metrics as biomarkers for recovery of motor and proprioceptive impairments after stroke. *Neurorehabil Neural Repair.* 2019; doi:10.1177/1545968319868714.

Cramer SC, Dodakian L, Le V, See J, Augsburger R, McKenzie A, Zhou R, et al. Efficacy of Home-Based Telerehabilitation vs In-Clinic Therapy for Adults After Stroke: A Randomized Clinical Trial. *JAMA Neurol.* 2019; 76(9):1079-1087. DOI: 10.1001/jamaneurol.2019.1604.

Zhou RJ, Mousavi Hondori H, Khademi M, **Cassidy JM**, Wu KM, Yang DZ, Kathuria N, et al. Predicting gains with visuospatial training after stroke using an EEG measure of frontoparietal circuit function. *Front Neurol.* 2018; 9:597.

Cassidy JM, Tran G, Quinlan EB, Cramer SC. Neuroimaging identifies patients most likely to respond to a restorative stroke therapy. *Stroke.* 2018; 49(2): 433-438.

Frost K, Chen M, **Cassidy JM**, Snow L, Hodges J, Van de Winckel A, Kimberley TJ, Carey JR. Paired Associative Stimulation to Suppress Contralateral Corticospinal Excitability in Three People with Stroke Using N-of-1 Crossover Design. *J Neurol Transl Neurosci.* 2017; 5(2):1084.

Cassidy JM, Cramer SC. Spontaneous and Therapeutic-Induced Mechanisms of Functional Recovery After Stroke. *Transl Stroke Res.* 2017; 8(1): 33-46.

Cassidy JM, Chu H, Chen M, Kimberley TJ, Carey JR. Interhemispheric inhibition measurement reliability in stroke: a pilot study. *Neuromodulation.* 2016; 19(8), 838-847.

Chen CY, Rich TL, **Cassidy JM**, Gillick BT. Corticospinal Excitability in Children with Congenital Hemiparesis. *Brain Sci.* 2016; 6(4). Pii:E49.

Rich TL, **Cassidy JM**, Menk J, Van Heest A, Krach LE, Carey JR, Gillick BT. Stability of stereognosis after pediatric repetitive transcranial magnetic stimulation and constraint induced movement therapy clinical trial: brief report. *Dev Neurorehabil.* 2016, 1-4.

Cassidy JM, Carey JR, Lu C, Krach LE, Durfee WK, Gillick BT. Ipsilesional motor-evoked potential absence in pediatric stroke impacts tracking accuracy of the less affected hand. *Res Dev Disabil.* 2015; 47,154-164.

Cassidy JM, Chu H, Anderson DC, Krach LE, Snow L, Kimberley TJ, Carey JR. A comparison of primed low-frequency repetitive transcranial magnetic stimulation treatments in chronic stroke. *Brain Stimul.* 2015; 8(6), 1074-1084.

Gillick BT, Krach LE, Feyma T, Rich TR, Moberg KJ, Menk J, **Cassidy JM**, Kimberley T, Carey JR. Safety of primed repetitive transcranial magnetic stimulation and modified constraint-induced movement therapy in pediatric hemiparesis. *Arch Phys Med Rehab.* 2015; 96(4), S104-S113.

Cassidy JM, Gillick BT, Carey JR. Priming the Brain to Capitalize on Metaplasticity in Stroke Rehabilitation. *Phys Ther.* 2014; 94(1), 139-50.

Gillick BT, Krach LE, Feyma T, Rich T, Moberg K, Menk J, **Cassidy JM**, Carey JR. Primed low-frequency repetitive transcranial magnetic stimulation and constraint-induced movement therapy in pediatric hemiparesis: a randomized trial. *Dev Med Child Neurol.* 2014; 56(1), 44-52.

Carey JR, Deng H, Gillick BT, **Cassidy JM**, Anderson DC, Zhang L, Thomas W. Serial treatments of primed low-frequency rTMS in stroke: Characteristics of responders vs. nonresponders. *Restor Neurol Neuros.* 2014; 32(2), 323-35.

BOOK & CHAPTER CONTRIBUTIONS

Cramer SC, **Cassidy JM**. Application of fMRI to Monitor Motor Rehabilitation. *fMRI Techniques and Protocols*, Neuromethods, vol 42. Humana Press.

Hewitt A, Esler A, Stonach S, Zemanek L, Adler E, Arndt J, **Cassidy JM**, Peyton R, Rich T. (2016) Other Health Professions. In I.L. Rubin et Al. (eds) *Health Care for People with Intellectual Disabilities Across the Lifespan*. Springer International Publishing, Switzerland.

PUBLISHED ABSTRACTS

Cassidy JM, Kaur K, Masuda AK, Srinivasan R, Cramer SC. EEG is a Useful Biomarker of Motor Recovery in Early Stroke Rehabilitation. *Stroke* 50.suppl_1 (2019): ATMP46-ATMP46.

Cassidy JM, Wodeyar A, Wu J, Srinivasan R, Cramer SC. Linking Post-stroke Injury, Neural Function, and Motor Behavior With EEG. *Stroke* 50.suppl_1 (2019): WP181-WP181.

Cassidy JM, Srinivasan R, Aziz Z, Yang DZ, O'Brien C, Cramer SC. Neural Function and Injury Combined Best Predict Behavioral Gains During Inpatient Stroke Rehabilitation. *Stroke* (2018): ATP158-ATP158.

Cramer SC, **Cassidy JM**, Ingemanson M, Srinivasan R. Effect of Corticospinal Tract Injury on Motor Cortex Function and Connectivity After Stroke. *Stroke* 48.suppl_1 (2017): A12-A12.

Cramer SC, Kaur A, Wu J, **Cassidy JM**, Shreve L, Zhou RJ, Vo C, et al. Utility of EEG for Estimating Infarct Volume During ER Assessment of Suspected Acute Stroke—A Pilot Study.” *Stroke* 48.suppl_1 (2017): AWP263-AWP263.

Cramer SC, Zhou RJ, Ingemanson M, Choi JC, Wu KM, Kaur A, Erani F, et al. Targeted Training of a Motor-parietal Circuit Improves Its Behavioral Output. *Stroke* 48.suppl_1 (2017): A11-A11.

Cassidy JM, Chu H, Carey JR. Test-retest reliability of transcranial magnetic stimulation measures in stroke. Program No. 308.02. 2015 Neuroscience Meeting Planner, Chicago, IL: Society for Neuroscience, 2015. Online

Cassidy JM, Anderson DC, Chen M, Snow L, Thomas W, Carey JR. Primed vs. unprimed low-frequency repetitive transcranial magnetic stimulation in stroke. Program No. 716.05. 2014 Neuroscience Meeting Planner, Washington DC: Society for Neuroscience, 2014. Online.

Cassidy JM, Anderson D, Adams B, Anderson A, Appel E, Baregi L, Bartholet C, Heberer K, Ryer C, Carey JR. Effect of priming on low-frequency repetitive transcranial magnetic stimulation in chronic stroke: A Case Study. *J Neurol Phys Ther* 2014; 38(1): 81-82.

Cassidy JM, Gillick BT, Battista B, Brown C, Calmes J, Cupit J, Carey JR. Cortical Volume Differences and Presence of Motor-Evoked Potential in Pediatric Stroke. *Pediatr Phys Ther.* 25(1): 90-128. Spring 2013.

Cassidy JM, Gillick BT, Anderson DC, Hussein H, Carey JR. Determination of rTMS Responsiveness in Stroke Using Dual-Process Theory. Program No. 276.13. 2012 Neuroscience Meeting Planner. New Orleans: Society for Neuroscience, 2012. Online.

Di Fabio R, **Kream (Cassidy) JM**, Kvam E, Karasik A. Are Footlift Kinematics Dependent on Gaze Control During Stair Stepping? *J Neurol Phys Ther.* 2007; 31(4): 208.

INVITED LECTURES & PRESENTATIONS

Augmenting Stroke Recovery and Motor Learning Across the Lifespan With Priming. Duff S, Boyd L, Gillick BT, Cassidy JM. American Congress of Rehabilitation Medicine (ACRM), 2021.

Biomarkers in Stroke Rehabilitation. WakeMed SHINE Conference, Raleigh, NC, 2021.

Mentorship for new faculty and PhD Students, American Council of Academic Physical Therapy (ACAPT) & Research-Intensive Programs in Physical Therapy (RIPPT), 2021.

Low-Frequency Oscillations Are A Biomarker of Injury & Recovery After Stroke, Washington University, St. Louis (remote presentation via Zoom organized by Dr. Alexander Carter, MD), 2020.

Stroke & Stroke Rehabilitation. Closed Loop Engineering for Advanced Rehabilitation (CLEAR), UNC/NC State Joint Department of Biomedical Engineering, 2020.

Biomarkers in Stroke Rehabilitation. WakeMed SHINE Conference, Raleigh, NC, 2020

EEG Predictors of Stroke Recovery. International Stroke Conference, Los Angeles, CA 2020.

Recovery and Rehabilitation In Real Life. Department of Allied Health Sciences, Office of Research & Scholarship, Research Forum, 2020.

Rewiring & Recovery: Brain Connectivity In Stroke Rehabilitation. Orange County Stroke Recovery Network, Anaheim, CA, 2018.

Check That Engine Light: Neuroimaging in Early Stroke Rehabilitation. NeuroRehab Seminar Series, Division of Biokinesiology, University of Southern California, 2018.

Neuroimaging biomarkers and predictors of motor recovery: implications for PTs. Cassidy JM, Hayward K, Stewart J, Borich M. Combined Sections Meeting, American Physical Therapy Association (APTA), New Orleans, LA, 2018

Application of neuroimaging in early stroke for motor recovery prediction. Society for Neuroscience Annual Meeting, Washington DC, 2017.

Prediction of Post-Stroke Motor Recovery Using Functional & Structural Brain Measurements. Canadian Partnership for Stroke Recovery Trainee Seminar Series, 2017.

Post-Hospital Tele-Rehabilitation. UC Irvine Comprehensive Stroke and Neurocritical Care Symposium: Telestroke and Brain Reperfusion, Irvine, CA, 2017

Hot topics in neurorehabilitation research. UC Irvine Medical Center (Physical Medicine & Rehabilitation Residents), 2017.

Neuroimaging In Early Stroke Motor Rehabilitation, UC Irvine; Big Data In Brain Science Workshop, 2017

Predicting Post-Stroke Motor Recovery With Measurements of Brain Function & Structure, UC Irvine; Postdoctoral Research Symposium, 2016

Acute stroke research in brain function with EEG & MRI, UC Irvine; Progress in Neurobiology (PiN) seminar series, 2016.

Acute stroke research in brain function with EEG & MRI, UC Irvine Medical Center, 2015

Optimization of Repetitive Transcranial Magnetic Stimulation With Priming In Chronic Stroke, University of Minnesota Rehabilitation Science Seminar Series, 2014.

Metaplasticity & Motor Learning. Minneapolis VA, 2014.

Brain Neuromodulation Using Repetitive Transcranial Magnetic Stimulation (rTMS) To Promote Recovery Of Hand Function In People With Stroke. 5th Annual Spine, Brain, and Stroke Conference, Fairview Neuroscience and Spine Institute; Minneapolis, MN, 2013.

Capitalizing on Metaplasticity in Motor Learning and Rehabilitation. Center for Clinical Movement Science Colloquium; Minneapolis, MN, 2013.

Improved Hand Function Following 6-Hz Primed Low- Frequency rTMS to Contralesional M1 in Stroke. Neuromuscular Plasticity Symposium; University of Florida, Gainesville, 2012.

rTMS and Motor Learning Training to Promote Recovery from Hemiparesis. Center for Clinical Movement Science Colloquium; Minneapolis, MN, 2011.

Tools To Get Kids Active. 1st Annual Childhood Obesity and Diabetes Conference, Park Nicollet Healthcare System, 2009.

POSTER PRESENTATIONS

*Muthukrishnan H, Jeangilles E, O'Neil A, Cassidy JM. *Brain Structure and Function Associations In Stroke*. 2021 UNC Celebration of Undergraduate Research. Virtual conference ***work done by students mentored by Dr. Cassidy**

*Mark JI, Gangwani R, Zheng E, Vaughn RM, **Cassidy JM**. *Feasibility & Utility of Corticomuscular Coherence Measurement in Early Stroke Motor Recovery: A Preliminary Analysis*. 2021, American Society for Neurorehabilitation. Virtual conference ***work done by students mentored by Dr. Cassidy**

*Ryan H, Fabian K, Mark J, Jeangilles J, Chowdhury R, Muthukrishnan H, Zheng E, Lewek M, **Cassidy JM**. *Effects of Movement- and Cognitive-Based Priming on Brain Function*. 2021, Combined Sections Meeting of American Physical Therapy Association. Virtual conference ***work done by students mentored by Dr. Cassidy**

*Ryan H, Fabian K, Mark J, Jeangilles J, Chowdhury R, Muthukrishnan H, Zheng E, Lewek M, **Cassidy JM**. *Effects of Movement-Based and Cognitive Priming on Brain Function*. 2020, Human Movement Science Curriculum (HMSC) Symposium, Chapel Hill, NC (abstract accepted, symposium cancelled due to Covid-19) ***work done by students mentored by Dr. Cassidy**

Cassidy JM, Wodeyar A, Srinivasan R, Cramer SC. Coherent Neural Oscillations Inform Early Stroke Motor Recovery. 2020, International Stroke Conference, Los Angeles, CA

Wodeyar A, **Cassidy JM**, Wu J, Cramer SC, Srinivasan R. *Influence of Damage to the Structural Connectome on Functional Connectivity*. *Accepted for 2019 Organization for Human Brain Mapping (OHBM), Rome

Cassidy JM, Wodeyar A, Wu J, Srinivasan R, Cramer SC. *Linking Post-Stroke Injury, Neural Function, and Motor Behavior With EEG*. 2019, International Stroke Conference, Honolulu, HI

Cassidy JM, Kaur K, Masuda AK, Srinivasan R, Cramer SC. *EEG is a Useful Biomarker of Motor Recovery in Early Stroke Rehabilitation*. 2019, International Stroke Conference; Honolulu, HI

Cassidy JM, Kaur K, Masuda AK, Srinivasan R, Cramer SC. *Functional Neuroimaging Predicts Motor Recovery in Early Stroke Rehabilitation*. 2018, American Society for Neurorehabilitation; San Diego, CA

Hayward KS, Ferris J, Lohse K, Borich M, Borstad A, Stewart J, Dukelow S, **Cassidy J**, Findlater S, Neva J, Cramer SC, Boyd LA. *Severity of Impairment is Important When Exploring Biomarkers of Upper Limb Outcome Post-Stroke*. 2018, American Society for NeuroRehabilitation (ASNR); San Diego, CA, *Awarded Fletcher McDowell Award, Best Abstract in Clinical Science

Wodeyar A, **Cassidy JM**, Wu J, Cramer SC, Srinivasan R. *EEG functional connectivity reflects MRI estimates of damage to the fronto-occipital fasciculus*. 2018, Organization for Human Brain Mapping (OHBM), Singapore

Cassidy JM, Srinivasan R, Cramer SC. *Neural function and injury combined best predict behavioral gains during inpatient stroke rehabilitation*. 2018, International Stroke Conference; Los Angeles, CA

Cassidy JM, Srinivasan R, Cramer SC. *Baseline motor impairment impacts predictive performance of functional EEG measurements for early motor recovery after stroke*. 2017, American Society for NeuroRehabilitation (ASNR); Baltimore, MD

Hayward KS, Borich MR, Cramer SC, Borstad A, Stewart JC, Neva JL, Ferris JK, **Cassidy JM**, Boyd LA. *Regional diffusion differences in people with severe upper limb impairment post-stroke: A multicenter study*. 2017, Society for Neuroscience Annual Conference; Washington DC.

Zhou R, Ingemanson M, Choi JJ, Wu K, Kaur A, Erani F, Yang D, **Cassidy JM**, et al. *Targeted Training of a Motor-Parietal Circuit Improves Its Behavioral Output*. 2017, International Stroke Conference. Houston, TX

Dodakian L, Zhou RJ, Chiu NL, See J, Augsburger R, McKenzie A, **Cassidy JM**, Heckhausen J, Scacchi W, Cramer SC. *Telerehabilitation in the Home Versus Therapy In-Clinic For Patients With Stroke*. 2017, International Stroke Conference; Houston, TX

Kaur A, Wu JC, **Cassidy JM**, Shreve L, Zhou R, Vo C, Medzade AI, Tran TB, Yang DZ, Yu W, Chakravarthy B, Hoonpongsimanont W, Barton E, Srinivasan R, Cramer SC. *Feasibility and Utility of EEG For Estimating Infarct Volume During ER Assessment of Suspected Acute Stroke—A Pilot Study*. 2017, International Stroke Conference; Houston, TX

Cramer SC, Zhou R, Ingemanson M, Choi JJ, Wu KM, Kaur A, Erani F, Yang DZ, **Cassidy JM**, et al. *Targeted Training Of A Motor-Parietal Circuit Improves Its Behavioral Output*. 2017, International Stroke Conference; Houston, TX

Cramer SC, **Cassidy JM**, Ingemanson M, Srinivasan R. *Effect of Corticospinal Tract Injury on Motor Cortex Function and Connectivity After Stroke*. 2017, International Stroke Conference; Houston, TX

Kaur A, Shreve L, Vo C, Nguyen AP, Wu J, **Cassidy JM**, Wu KM, et al. *Rapid EEG of acute ischemic stroke in the emergency room*. 2016, Society for Neuroscience Annual Conference; San Diego, CA

McMahan BJ, **Cassidy JM**, O'Brien C, Brentlinger G, Srinivasan R, Cramer SC. *Remote effects of stroke on brain function and motor cortex connectivity*. 2016, Society for Neuroscience Annual Conference; San Diego, CA

Cassidy JM, Carey JR, Krach LE, Feyma T, Liu C, Durfee W, Gillick BT. *Ipsilesional motor-evoked potential absence in pediatric hemiparesis impacts tracking accuracy of the less affected hand*. 2016, IV STEP, The Ohio State University; Columbus, OH

Cassidy JM, Chu H, Carey JR. *Test-retest reliability of transcranial magnetic stimulation measures in stroke*. 2015, Society for Neuroscience Annual Conference; Chicago, IL

Cassidy JM, Anderson DC, Chen M, Snow L, Thomas W, Carey JR. *Primed vs. unprimed low-frequency repetitive transcranial magnetic stimulation in stroke*. 2014, Society for Neuroscience Annual Conference; Washington DC.

Cassidy JM, Anderson DC, Thomas W, Carey JR. *6-Hz primed vs. unprimed low-frequency repetitive transcranial magnetic stimulation in stroke*. 2014 Neuromodulation Symposium; Minneapolis, MN

Rich TL, **Cassidy JM**, Van Heest AE, Krach LE, Carey JR, Gillick BT. *Investigation in pediatric stereognosis following 6-Hz primed low-frequency repetitive transcranial magnetic stimulation (rTMS) and constraint induced movement therapy (CIMT)*. 2014, Neuromodulation Symposium; Minneapolis, MN

Cassidy JM, Anderson D, Adams B, Anderson A, Appel E, Baregi L, Bartholet C, Heberer K, Ryer C, Carey JR. *Effect of priming on low-frequency repetitive transcranial magnetic stimulation in chronic stroke: A Case Study*. 2014, APTA Combined Sections Meeting; Las Vegas, NV

Rich TL, **Cassidy JM**, Van Heest AE, Krach LE, Carey JR, Gillick BT. *Investigation in pediatric stereognosis following 6-Hz primed low-frequency repetitive transcranial magnetic stimulation (rTMS) and constraint induced movement therapy (CIMT). Moving Forward in the Treatment of Pediatric Neurological Disorders*. 2014, Gillette Children's Specialty Healthcare; Minneapolis, MN

Cassidy JM, Ahn R, Alberts K, Bauer K, Berchem J, Bieniek J, Brinkman E, Carey JR. *Priming the brain to optimize rTMS delivery in stroke*. 2013, Institute for Engineering in Medicine (IEM) Conference; Minneapolis, MN

Cassidy JM, Anderson DC, Carey JR. *6-Hz Primed vs. Unprimed Low-Frequency rTMS in Chronic Stroke: A Case Study Report*. 2013 Minnesota Neuromodulation Symposium; Minneapolis, MN

Cassidy JM, Gillick BT, Battista B, Brown C, Calmes J, Cupit J, Carey JR. *Cortical Volume Differences and Presence of Motor-Evoked Potential in Pediatric Stroke*. 2013, APTA Combined Sections Meeting; San Diego, CA

Cassidy JM, Gillick BT, Anderson DC, Hussein H, Carey JR. *Determination of rTMS Responsiveness Potential in Stroke Using Dual-Process Theory*. 2012, Society for Neuroscience Annual Conference; New Orleans, LA

Kream (Cassidy) JM, Kvam E, Karasik A. *Are Footlift Kinematics Dependent on Gaze Control During Stair Stepping?* 2008, University of Minnesota Physical Therapy Research Symposium

Kream (Cassidy) JM, Jaffer F, Karasik A, Kvam E, Di Fabio R. *Validity and Internal Consistency of the Progressive Supranuclear Palsy Rating Scale-Short Form*. 2008, APTA Combined Sections Meeting; Nashville, TN

GRANTS

Active:

Stroke Management Training and Inpatient Rehabilitation Discharge Education: The STRIDE Program

UNC Center for Health Innovation Pilot Grant
Role: PI, \$50,000

Brain Network Connectivity Measures In Early Stroke Rehabilitation

R00HD091375, NIH/NICHHD, 2019-2022
Role: co-PI, 75% effort, \$750,000

Completed:

Brain Network Connectivity Measures In Early Stroke Rehabilitation

1 K99HD091375 01A1, NIH/NICHHD, 2017-2019
Role: PI, 100% effort, \$198,392

Multidisciplinary Exercise Sciences Training Program

T32 AR047752-11A1, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), 2015-2017

PI: Vincent Caiozzo, PhD
Role: Postdoctorate Trainee/Fellow

Promotion of Doctoral Studies (PODS)-II Fellowship, Foundation for Physical Therapy, 2013-2014
\$15,000

Promotion of Doctoral Studies (PODS)-II Fellowship, Foundation for Physical Therapy, 2012-2013
\$15,000

rTMS and Motor Learning Training to Promote Recovery from Hemiparesis

1 R01 HD053153-01A2, NIH/NICHHD, 2008-2012
PI: James Carey, PT, PhD
Role: Research Assistant

Pediatric Hemiplegia: Synergistic Treatment using rTMS and CIMT

1RC1HD63838-1, NIH Challenge Grant, NIH/NICHHD, 2009-2012
PI: James Carey, PT, PhD
Role: Research Assistant

PATENTS

Cramer SC, **Cassidy JM**, Le V, McKenzie AL, Scacchi W, Zhou R, Heckhausen J, Genevro WF, Dodakian L, See J. *Systems and Methods For Facilitating Rehabilitation Therapy*. U.S. Patent Application No. 15/254,029.

TEACHING ACTIVITIES

Lecturer – University of North Carolina at Chapel Hill Division of Physical Therapy, 2019-
PHYT 727 Motor Control and Motor Learning
PHYT 701 Motor Development and Human Movement Across the Lifespan
PHYT 784 Neuromuscular Assessment and Intervention I
PHYT 854 Capstone Project
PHYT 880 Pediatric Elective course

Guest Lecturer – University of North Carolina at Chapel Hill Human Movement Science Curriculum Graduate Program
IHMS 870 Doctoral Seminar
AHSC 909 Proposal and Grant Writing

Adjunct Instructor – Chapman University Department of Physical Therapy, 2015-2019
PT 643 Motor Control/Motor Learning

Teaching Assistant – University of Minnesota Graduate Program in Physical Therapy, 2010-2014
PT6280 Clinical Assessment
PT6287 Neurorehabilitation
PT6288 Pediatric Rehabilitation
50 students

CONTINUING CLINICAL EDUCATION (Courses Taught)

Cadaver Anatomy Review for Allied Health Professions, 2013
University of Minnesota; Minneapolis, MN
100 attendees

MENTORING EXPERIENCE (UNC at Chapel Hill)

Doctoral Students:

Rachana Gangwani, 2020-
Rachel Vaughn, 2020-

Masters Students:

Josh Smith, 2019-2021, UNC/NC State Joint Program in Biomedical Engineering

DPT Students:

Sam Ward, 2020-2021
Brianna Colello, 2020-2021
Heather McGovern, 2020-2021
Raiya Feinberg, 2020-2021
Hannah Ryan, 2019-2021
Katie Fabian, 2019-2021
Amelia Cain, 2019-2020

Amy Collins, 2019-2020

PostBaccalureate:

Jasper Mark, 2019-

Undergraduate Students:

Ananya Tandry, 2021-

Anna Geib, 2021-

*Katherine Hendry, 2020-

Hongyu Li, 2020-2021

Eric Zheng, 2020-

Ramis Chowdhury, 2019-2021

*Hrishika Muthukrishnan, 2019-2021

Kaitlin DeMarco, 2019-2021

Etienne Jeangilles Jr., 2019-

Megan Hasse, 2019-2020

*Neuroscience (NSCI) 395 Independent Study Research Mentor

SERVICE & ENGAGEMENT

To Discipline/Profession:

- Member, Organization for Human Brain Mapping, 2020
- Physical Therapist, Helping Kids Constraint-Induced Movement Therapy Camp, Chapel Hill, North Carolina, 2019-present
- Abstract reviewer, Academy of Neurologic Physical Therapy, American Physical Therapy Association (APTA), 2018-present
- Member, APTA Research Section, 2016-present
- Member, American Society for Neurorehabilitation, 2016-present
- Ad-hoc journal reviewer: Brain Injury, Clinical Case Reports, Experimental Brain Research, Experimental Brain Stimulation, Journal of Clinical Neurophysiology, Journal of Neurologic Physical Therapy, Journal of Neurophysiology, Journal of Neurological Sciences, Human Brain Mapping, Neurorehabilitation and Neural Repair, Neuroimaging Reports
- Member, APTA Academy of Neurologic Physical Therapy, 2012-present
- Member, Society for Neuroscience, 2012-present
- Member, American Heart Association, 2012-present
- Member, APTA, 2006-present
- Member, APTA Academy of Pediatric Physical Therapy, 2009-2016
- Minnesota APTA Research Subcommittee, 2009-2010
- Minnesota APTA Student Group President, 2008-2009

Within UNC-Chapel Hill:

- Director, UNC Neuro STEP UP Program
- Member, Director Search Committee, Human and Movement Sciences Curriculum, 2020
- Member, Peer Mentoring Policy Review Committee, Department of Allied Health Sciences, 2020
- Member, Research Advisory Committee, Department of Allied Health Sciences-Office of Research & Scholarship, 2019
- Dissertation Committee Member
 - **James Ailsworth**, UNC/NC State Joint Program in Biomedical Engineering
 - **Grace Bellinger**, Northwestern University, Neuroscience- Movement & Rehabilitation Science Program

Other:

- Grant Reviewer, Medical Research Council
- Panelist, Postdoc Grant Writing Series: NIH K99/R00 Awardees Panel, UC Irvine Postdoctoral Scholar Association & Office of Postdoctoral Affairs, 2018
- UC Irvine Postdoctoral Association Board, Co-Chair of Professional Development, 2016-2019
- California State Summer School for Mathematics and Science (COSMOS), 2015-2018
- Stroke Bootcamp, Chapman University, Irvine, California, 2015-2018
- Council of Graduate Students, University of Minnesota, Departmental Representative, 2011-2014
- Inter-professional Street Outreach Project, Clinic Preceptor, 2010-2011

ACTIVE PHYSICAL THERAPY LICENSURE

State of North Carolina, License #P18719, 2019-present

State of Minnesota, License #8395, 2009-present