CURRICULUM VITAE

Natalia Sánchez, PhD
August 2, 2022

Chapman University
Department of Physical Therapy
Crean College of Health and Behavioral Sciences
Rinker Health Science Campus
9401 Jeronimo Rd
Irvine, CA 92618
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ACADEMIC APPOINTMENTS

Assistant Professor (Tenure Track) August 2022 – Present
Department of Physical Therapy
Chapman University
Irvine, CA 92618

Assistant Professor of Research May 2019 – July 2022
Division of Biokinesiology and Physical Therapy
University of Southern California
Los Angeles, CA 90033

EDUCATION

POST-GRADUATE TRAINING

University of Southern California Los Angeles, CA
Graduate Certificate in Clinical, Biomedical and Translational Investigations Sept. 2019 – December 2020
Keck School of Medicine, Department of Preventive Medicine

University of Southern California Los Angeles, CA
Postdoctoral research fellow, Biokinesiology and Physical Therapy September 2015 – April 2019

GRADUATE TRAINING

Northwestern University Evanston, IL
Doctor of Philosophy, Biomedical Engineering, Neural Engineering Track September 2015
McCormick School of Engineering, Department of Physical Therapy and Human Movement Sciences
Advisor: Julius P.A. Dewald
Dissertation: Abnormal Static and Dynamic Joint Torque Patterns in the Lower Extremities of Individuals with Chronic Hemiparetic Stroke

Northwestern University Evanston, IL
Masters of Science, Biomedical Engineering December 2012
McCormick School of Engineering
Thesis: A multiple degree of freedom lower extremity isometric device to simultaneously quantify hip, knee, and ankle torques

UNDERGRADUATE TRAINING

Universidad EIA – Universidad CES Medellín, Colombia

Natalia Sánchez, Ph.D.

Bachelor of Science, Biomedical Engineering January 2008

SCHOLARLY ACTIVITY – FUNDING RECEIVED

Completed Research Support

NCATS KL2TR001854 **06/01/2019-05/31/2022**

"Development and application of big data techniques to gait analysis: dissociating recovery from compensation during gait in individuals post-stroke"

Aim: we propose to develop a large, longitudinal stroke gait database to which we can apply scientifically sound machine-learning algorithms. This will allow the identification of gait patterns that could be used to predict locomotor recovery in a prospective, observational study.

Amount: $175,000

Role: Scholar (Siegel PI)

NCMRR P2CHD065702 **07/01/2020-06/30/2021**

Center for Large Data Research & Data Sharing in Rehabilitation (CLDR) Pilot Project Program

"Stroke Initiative for Gait Data Evaluation (STRIDE)"

Aim: STRIDE is an initiative based at the University of Southern California to create an inter-institutional, public database containing de-identified demographic and kinematic, kinetic, and spatiotemporal measures assessed via gait analysis in individuals post-stroke, to provide a larger and more heterogeneous research dataset than that typically amassed at a single institution.

Role: Pilot project award (Ottenbacher PI)

Amount: $10,000

SC CTSI Research Voucher **01/2020-12/2020**

Use of automated trial promoter for participant recruitment via social media

Amount: $3,000

Role: Principal Investigator

USC CTSI Clinical Research Pilot Award **06/01/2018-05/31/2019**

"Clinical and Behavioral Assessment of Fall Risk during Walking in People Post-Stroke"

The aims of this pilot study are to: 1) establish the validity of an objective biomechanical assessment of fall risk that directly measures a patient's ability to recover from a loss of balance; 2) determine which patient-specific physical and psychological factors are associated with measures of fall risk; and 3) determine if shifting a patient's walking pattern toward the typical pattern observed in healthy individuals leads to improvements in balance.

Amount: $40,000

Role: Co-Investigator (Finley PI)

American Heart Association **06/01/2016-05/31/2018**

Postdoctoral Fellowship 16POST29610000

"Is asymmetry optimal? Characterization of Individual Differences in the Metabolic Cost of Asymmetry Post-Stroke"

The primary objective of this project was to understand how short-term, biofeedback-based interventions aimed at improving walking symmetry affects the energy cost of walking in people post-stroke.

Amount: $98,950

Role: Principal Investigator – Post-doctoral Fellow (Finley Sponsor)

American Heart Association **01/01/2013-12/31/2014**

Pre-doctoral Fellowship 13PRE14690048

Lower Extremity Synergies After Hemiparetic Stroke

Aim: The primary objective of this project was to characterize changes in the voluntary control of the lower extremity post-stroke.
Amount: $52,000
Role: Principal Investigator – Pre-doctoral Fellow (Dewald Sponsor)

AWARDS

Training in Grantsmanship for Rehabilitation Research (TIGRR) (2021)
TIGRR Workshop is funded by NIH/NICHD grant number 2R25HD074546-07.

Summer Program in Data Curation for Rehabilitation Research and Related Clinical Trials offered by the Inter-university Consortium for Political and Social Research (ICPSR) (2018)
Full Scholarship

Society for the Neural Control of Movement (2018)
Under-represented minorities' diversity fellowship

Honors Student - Escuela de Ingenieria de Antioquia (2008)

PUBLICATIONS

Manuscripts in preparation

Manuscripts under review

SA. Brinkerhoff, **N Sánchez,** JA. Roper. Weekly exercise affects gait adaptation in healthy young adults (BiorXiv, 2022)

Accepted Manuscripts

Published Peer-Reviewed Manuscripts

SJ. Abram, KL. Poggensee, **N. Sánchez**, SN. Simha, JM. Finley, SH. Collins, and JM Donelan. General variability leads to specific adaptation toward energy optimal policies. Current Biology (2022), https://doi.org/10.1016/j.cub.2022.04.015

N Sánchez, N Schweighofer, JM Finley. Different biomechanical variables explain within-subjects versus between-subjects variance in step length asymmetry post-stroke. IEEE Trans Neural Syst Rehabil Eng. 2021;29:1188-1198. doi: 10.1109/TNSRE.2021.3090324.

S Park, C Liu, **N Sánchez**, JK. Tilson, SJ. Mulroy, and JM. Finley. Using biofeedback to reduce spatiotemporal asymmetry impairs dynamic balance in people post-stroke**.** Neurorehabil Neural Repair. 2021 Jun 1;:15459683211019346. doi: 10.1177/15459683211019346.

N Sánchez, CJ Winstein. Lost in translation: simple steps in experimental design of neurorehabilitation-based research interventions to promote motor recovery post-stroke. Front Hum Neurosci. 2021;15:644335. doi: 10.3389/fnhum.2021.644335.

N Sánchez, S Simha, JM Donelan, JM Finley. Using asymmetry to your advantage: learning to acquire and accept external assistance during prolonged split-belt walking. J Neurophysiol. 2021 Feb 1;125(2):344-357. doi: 10.1152/jn.00416.2020.

N Sánchez, S Simha, JM Donelan, JM Finley. Taking advantage of external mechanical work to reduce metabolic cost: the mechanics and energetics of split-belt treadmill walking. J Physiol. 2019 Aug;597(15):4053-4068. doi: 10.1113/JP277725.

F Pozzi, HA Plummer, **N Sánchez**, Y Lee, LA Michener. Electromyography activation of shoulder and trunk muscles is greater during closed chain compared to open chain exercises. J Electromyogr Kinesiol. 2019 May 12; 102306. doi: 10.1016/j.jelekin.2019.05.007.

N Sánchez, AM Acosta, R Lopez-Rosado, JPA Dewald. "Neural Constraints Affect the Ability to Generate Hip Abduction Torques When Combined with Hip Extension or Ankle Plantarflexion in Chronic Hemiparetic Stroke" Front Neurol. 2018;9:564. doi: 10.3389/fneur.2018.00564.

N Sánchez, JM Finley. Individual Differences in Locomotor Function Predict the Capacity to Reduce Asymmetry and Modify the Energetic Cost of Walking Post-Stroke". Neurorehabil Neural Repair. 2018 Aug;32(8):701-713. doi: 10.1177/1545968318787913.

N Sánchez, S Park, JM Finley. Evidence of Energetic Optimization during Adaptation Differs for Metabolic, Mechanical, and Perceptual Estimates of Energetic Cost. Sci Rep. 2017 Aug 9;7(1):7682. doi: 10.1038/s41598-017-08147-y.

N Sánchez, AM Acosta, R Lopez-Rosado, AHA Stienen, JPA Dewald. Lower Extremity Motor Impairments in Ambulatory Chronic Hemiparetic Stroke: Evidence for Lower Extremity Weakness and Abnormal Muscle and Joint Torque Coupling Patterns. Neurorehabil Neural Repair. 2017 Sep;31(9):814-826. doi: 10.1177/1545968317721974.

N Sánchez, AM Acosta, AHA Stienen, JPA Dewald . A multiple degree of freedom lower extremity isometric device to simultaneously quantify hip, knee, and ankle torques. IEEE Trans Neural Syst Rehabil Eng. 2015 Sep;23(5):765-75. doi: 10.1109/TNSRE.2014.2348801.

Published Datasets

Sánchez N, Stroke Initiative for Gait Data Evaluation (STRIDE), [United States], 2012-2020. Inter-university Consortium for Political and Social Research [distributor], 2021-06-21. https://doi.org/10.3886/ICPSR38002.v1

Conference Proceedings

N Sánchez, JPA Dewald. Constraints imposed by the lower extremity extensor synergy in chronic hemiparetic stroke: Preliminary findings. Annu Int Conf IEEE Eng Med Biol Soc. 2014;2014:5804-7. doi: 10.1109/EMBC.2014.6944947

ABSTRACTS

Conference presentations – platforms

SA. Brinkerhoff, **N Sánchez,** and JA. Roper. Weekly Exercise Amount Affects Gait Adaptation in Healthy Young Adults. American Society of Biomechanics, Virtual Conference 2021.

N Sanchez, SN. Simha, JM Donelan, and JM. Finley. Using Visual Guidance to Acquire Work From the Treadmill During Split-belt Walking Does Not Accelerate Adaptation. American Society for Biomechanics, Virtual Conference 2020.

N Sanchez, SN. Simha, JM Donelan, and JM. Finley. Is more better? Evaluating the role of time in energy optimization during split-belt adaptation. Dynamic Walking. Canmore, Alberta. Canada 2019.

C Liu, S Park, **N Sánchez**, JK. Tilson, SJ. Mulroy, and JM. Finley. Asymmetries in the Reactive Control of Angular Momentum during Post-stroke Gait. International Society for Biomechanics. Calgary, Alberta. Canada. July, 2019

S Park, C Liu, **N Sánchez**, JK. Tilson, SJ. Mulroy, and JM. Finley. Impact of Modifying Spatiotemporal Asymmetry on Dynamic Balance during Walking Post-Stroke. Calgary, Alberta. Canada. July, 2019

F Pozzi, HA Plummer, **N Sánchez**, Y Lee, LA Michener. Closed chain exercises of the upper extremity elicit greater activation of shoulder and trunk muscles. Combined Sections Meeting, Washington, DC 2019.

N Sánchez, S Simha, JM Finley, JM Donelan. Exploiting Asymmetry to Gain Assistance during Split-belt Treadmill Walking. Advances in Motor Learning & Motor Control. San Diego, CA. November, 2018

N Sánchez, Simultaneous dimensionality reduction and regression to draw inference in gait analysis: an application to understanding gait asymmetry post-stroke. Submitted for World Congress of Biomechanics. Dublin, Ireland. July 2018.

N Sánchez, S Simha, JM Finley, JM Donelan. Experimental Analysis and Model-Based Predictions of Work Minimizing Strategies for Split-belt Walking. Dynamic Walking, Pensacola, FL 2018.

J.M. Finley, Chang Liu, and **N. Sanchez.** (2017). Mapping the Influence of Spatiotemporal Asymmetries on Energetic Cost and Reactive Balance during Walking. Dynamic Walking Conference in Mariehamn, Sweden.

N Sanchez. "Explicit modification of step length asymmetry transfers to over-ground walking post-stroke". American Society of Biomechanics, Boulder, CO 2017.

N Sánchez. "Volitional Coupling of Hip Extension with Hip Abduction is Altered Post-Stroke". World Congress of Biomechanics. Boston, MA. July 2014. Invited Speaker.

N Sánchez. "Spontaneous Extension-Adduction Coupling in the Post-Stroke Lower Extremity: Implications for Rehabilitation". Biomedical Engineering Society Annual Meeting. Seattle, WA. September 2013.

Conference presentations – Peer-reviewed abstracts (poster format)

N Sánchez, N Schweighofer, SJ. Mulroy, RT. Roemmich, TM. Kesar, G Torres-Oviedo, BE. Fisher, JM. Finley, CJ. Winstein. Multi-site identification of phenotypes of locomotor impairment in individuals with chronic stroke. APTA Combined Sections Meeting. San Antonio TX, Feb 2022 (withdrawn due to COVID pandemic).

N Sánchez, N Schweighofer, JM Finley. Between vs. Within-Subject Predictors of Step Length Asymmetry Post-Stroke: One Predictor Does Not Fit All. American Society for Neurorehabilitation. Virtual conference. 2021

N Sánchez. Combined dimensionality reduction and regression to identify correlates of step length asymmetry post-stroke. Society for the Neural Control of Movement, Santa Fe, NM, May 2018.

T Sukal-Moulton, **N Sánchez,** JPA Dewald. Simultaneous isometric joint torques measurement in the lower extremities of children and adults. American Academy for Cerebral Palsy and Developmental Medicine. Montreal, Canada. September 2017.

N Sánchez, S Park, J.M. Finley. Symmetry is Not Always Optimal: Mapping the Metabolic Cost Landscape of Walking on a Split-belt Treadmill. Society for the Neural Control of Movement. Montego Bay, Jamaica. April 2016. (Poster presentation).

S Park, **N Sánchez,** J.M. Finley. Modifying Adaptive Locomotor Learning using Body Weight Support. Society for the Neural Control of Movement. Montego Bay, Jamaica. April 2016. (Poster presentation).

R. Lopez-Rosado, **N Sánchez**, S. Adkins, M. Gordon, C. Montejano, JPA. Dewald. "Does Supine vs. Standing Posture Change Joint Torque Coupling Patterns in the Paretic Lower Extremity?" American Physical Therapy Association (APTA) Combined Sections Meeting. Las Vegas, NV. February 2014. (Poster presentation).

Conference presentations – Non peer-reviewed abstracts (poster format)

N Sánchez, JM Donelan, J.M. Finley**.** Guided exploration of energetic cost during split belt walking influences locomotor adaptation. Society for Neuroscience – Annual Meeting, San Diego CA, November 2022 (Poster presentation).

N Sánchez, SN Simha, JM Donelan, J.M. Finley**.** Prolonged exposure to split-belt walking promotes energy optimization during locomotor adaptation. Society for Neuroscience – Annual Meeting, Chicago IL, October 2019. (Poster presentation).

C. Liu, S. Park, **N. Sánchez,** J.K. Tilson, S.J. Mulroy, and J. M. Finley (2019), Altering Spatiotemporal Asymmetry Influences the Reactive Control of Balance During Walking in People Post-stroke. Society for Neuroscience – Annual Meeting, Chicago IL, October 2019. (Poster presentation).

S. Park, C. Liu, **N. Sánchez,** J.K. Tilson, S.J. Mulroy, and J. M. Finley (2019), Impact of Modifying Spatiotemporal Asymmetry on Frontal Plane Whole-body Angular Momentum during Walking Post-stroke. Society for Neuroscience – Annual Meeting, Chicago IL, October 2019. (Poster presentation).

JM. Finley, **N Sánchez**, CJ Winstein Y Gerasimenko, D Sayenko, VR Edgerton. Transcutaneous spinal stimulation modulates overground walking performance in individuals post-stroke. Society for Neuroscience – Annual Meeting, Chicago IL, October 2019. (Poster presentation).

Y Gerasimenko, D Sayenko, **N Sánchez**, JM. Finley, VR Edgerton. Transcutaneous spinal cord stimulation facilitates stepping performance in stroke patients. Society for Neuroscience – Annual Meeting, Chicago IL, October 2019. (Poster presentation).

N Sánchez, L Trejo, J.M. Finley**.** The capacity to modify asymmetry and reduce metabolic cost in people post-stroke depends on the direction of baseline asymmetry. Society for Neuroscience – Annual Meeting, Washington DC. November 2017. (Poster presentation).

N Sánchez, S Park, J.M. Finley. Perceptual, physiological and neuromechanical correlates of effort associated with step-length manipulations during split-belt walking. Society for Neuroscience – Annual Meeting, San Diego, CA. November 2016. (Poster presentation).

N. Sánchez, A.C. Dragunas, K.E. Gordon, J.P.A. Dewald. Effects of Abnormal Post-Stroke Extension/Adduction Coupling in the Lower Extremity During Gait Initiation: Preliminary Results. Society for Neuroscience – Annual Meeting, Chicago, IL. October 2015. (Poster presentation).

Hurley D, Hruby S, Joshi, Kang HW, Thompson CK, Miller LC, **Sanchez N**, Powers RK, Negro F, Farina D, Dewald JP, Heckman CJ. Mapping the discharge of motor unit populations in the human lower extremity. Society for Neuroscience – Annual Meeting, Chicago, IL. October 2015. (Poster presentation).

J. Yao, **N. Sánchez,** M. Owen, C. Carmona, J. Sullivan, JPA. Dewald. Sensorimotor Changes After an Intervention Using a Novel Assistive System – Rein Hand: A Case Report. American Society for Neurorehabilitation, Chicago, IL 2015. (Poster presentation).

N Sánchez, JPA Dewald. "Effect of paretic ankle plantarflexion in spontaneous and voluntary joint torque coupling patterns". Society for Neuroscience – Annual Meeting, Washington, DC. November 2014. (Poster presentation)

MA Owen, **N Sánchez**, JPA Dewald. "Cortical representation in the internal capsule in chronic stroke: preliminary results from a diffusion tensor study". Society for Neuroscience – Annual Meeting, San Diego, CA. November 2013. (Poster presentation)

N Sánchez, R Lopez-Rosado, JPA Dewald. "Increased hip adductor, as opposed to reduced hip abductor activity, may explain hip abductor weakness during isometric hip extension in the paretic lower extremity following stroke". Society for Neuroscience – Annual Meeting, San Diego, CA. November 2013. (Poster presentation).

N Sánchez, JPA Dewald. "Preliminary evidence for hip extension-adduction joint torque coupling in the lower extremity post-stroke". Society for Neuroscience – Annual Meeting, New Orleans, LA. October 2012. (Poster presentation).

N Sánchez, RL Hawe, JPA Dewald. "Assessment of reproducibility and sensitivity of corticospinal tract DTI derived metrics in stroke". Society for Neuroscience – Annual Meeting, San Diego, CA. November 2010. (Poster presentation).

RL Hawe, **N Sánchez**, JPA Dewald. "Reliability of Diffusion Tensor Imaging Measures in Subjects with and without Stroke". Annual Meeting of the Organization for Human Brain Mapping. Barcelona, Spain. June 2010. (Poster presentation).

INVITED TALKS AND PRESENTATIONS

Purdue University. Department of Health and Kinesiology.
Determining the factors that shape healthy and pathological walking patterns. March 2022

University of Texas – Austin. Department of Kinesiology and Health Education.
Determining the factors that shape healthy and pathological walking patterns. January 2022

University of Pittsburgh – Carnegie Mellon University, Center for the Neural Basis of Cognition (CNBC)
Early Career Research Seminar Series - underrepresented/minority neuroscientists. What We Have Learned from Assessing the Energetics of Adaptation to Split-Belt Walking. December 2020.

University of Colorado – Boulder, Department of Integrative Physiology IPHY Colloquium
It Pays to Walk Asymmetrically: What We Have Learned from Assessing the Energetics of Adaptation to Split-Belt Walking. November 2020

Division of Biokinesiology and Physical Therapy Neurorehabilitation Seminar.
Is More Better? Evaluating the Role of Experience in Energy Optimization during Split-Belt Adaptation. Los Angeles, CA, September 2019.

California Physical Therapy Association.
Cutting Edge Evidence: Everything a Practicing Clinician Needs to Know to Improve Outcomes After Stroke. Split-belt training after stroke and FES+Fast walking. Case presentation on exploration after stroke.
Long Beach, CA. April 2019.

TEACHING EXPERIENCE

- Technology in Sport: Field Assessment of Athletic Performance — Spring 2021 – 2022

Course Director. 2 contact hours per week
MS in Biokinesiology with Emphasis in Sports Science. Division of Biokinesiology and Physical Therapy, University of Southern California

- Functional Neuroanatomy — Fall 2020 – 2021

Instructor. 10 contact hours per week
Doctorate in Physical Therapy Program. Division of Biokinesiology and Physical Therapy, University of Southern California

- Technology in Sport: Field Assessment of Athletic Performance — Spring 2018 – 2020

Instructor. MS in Biokinesiology with Emphasis in Sports Science. Division of Biokinesiology and Physical Therapy, University of Southern California

- Functional Neuroanatomy — Fall 2018 – Fall 2019

Lab instructor. 4 contact hours per week
Doctorate in Physical Therapy Program. Division of Biokinesiology and Physical Therapy, University of Southern California

- Matlab Programming Bootcamp — Summer 2019

Instructor. 40 Contact Hours
Neuroscience Graduate Program. University of Southern California

- Biophysical Signal Processing — Winter 2012, 2014

Teaching Assistant. Northwestern University's Interdepartmental Neuroscience Program

- Neuroanatomy Laboratory — Winter 2013

Lab Instructor. Department of Physical Therapy and Human Movement Sciences, Northwestern University

- Advanced Systems Physiology: Neuroscience — Fall 2010

Teaching Assistant. Department of Biomedical Engineering, Northwestern University

MENTORING EXPERIENCE

Isabel Munoz-Orozco — Spring 2022
Undergraduate student in Kinesiology. California State University, Northridge
Participant recruitment, data collection and processing

Carly Post — Spring 2022
Doctorate in Physical Therapy Student. Division of Biokinesiology and Physical Therapy. University of Southern California

Data collection and clinical measures of walking recovery post-stroke

Camille Grandjean 2019 – 2020
Undergraduate Biomedical Engineering Student. University of Southern California
Using visual guidance to acquire work from the treadmill during split-belt walking does not accelerate adaptation

Noah Tristan 2019 – 2020
Undergraduate Biomedical Engineering Student. University of Southern California
Using visual guidance to acquire work from the treadmill during split-belt walking does not accelerate adaptation

Suzanne Adkins, Matthew Gordon, Cynthia Montejano 2013 – 2014
Doctorate of Physical Therapy Students at Northwestern University.
Effect of supine vs. standing posture in joint torque coupling patterns in the paretic lower extremity

SCIENTIFIC REVIEW

Year	Scientific Journal (number of reviewed papers)
2022	Scientific Reports (1) Journal of Neurorehabilitation Engineering (1) Journal of Biomechanics (1) Journal of Neurophysiology (1)
2021	Experimental Brain Research (1) Journal of Biomechanics (1) Journal of Experimental Biology (1) Journal of Neurophysiology (2) Neurorehabilitation and Neural Repair (1)
2020	Frontiers in Neurology (1) The Journal of Physiology (1) Royal Society Open Science (1) Journal of Neurorehabilitation Engineering (2) Experimental Gerontology (1) eLife (1) Journal of Biomechanics (1) Transactions in Neural Systems and Rehabilitation Engineering (1) Journal of Neurophysiology (1)
2019	Transactions in Biomedical Engineering (1) Neuroscience (1) Frontiers in Neuroscience (1) Journal of Neurorehabilitation Engineering (1) Gait and Posture (1) Transactions in Neural Systems and Rehabilitation Engineering (1) Journal of Applied Biomechanics (1)
2018	Neurorehabilitation and Neural Repair (3) Journal of Neurophysiology (1) Journal of Neurorehabilitation Engineering (1)

2016 Journal of Applied Biomechanics (1)

2017 Gait and Posture (1)

SERVICE AND LEADERSHIP

American Society for Neurorehabilitation June 2022 – Present
Diversity, Equity and Inclusion Committee

University Service
The Diversity, Anti-Racism, Inclusion, and Community Engagement Council Sept 2020 – July 2022
Student Support Subcommittee
Division of Biokinesiology and Physical Therapy, University of Southern California

Leader International Students Affinity group June 2020 – July 2022
Division of Biokinesiology and Physical Therapy, University of Southern California

Member Research, Teaching, Practice and Clinical Practice promotion committee June 2020 – July 2022
Division of Biokinesiology and Physical Therapy, University of Southern California

Reviewer of applications May 2019 – July 2022
Division of Biokinesiology and Physical Therapy Doctor of Physical Therapy program

Herman Ostrow School of dentistry USC March 2016 – July 2022
Poster Judge for the Herman Ostrow School of Dentistry Research Day

Organizer USC National Biomechanics Day April 2019

USC Viterbi School of Engineering July 2018
Judge for the 22nd Grodins Research Symposium in the Department of Biomedical Engineering

Mentor STEM Goes Red, American Heart Association January 2018 – July 2020
Mentoring of female high school students in the greater LA area with interest in STEM careers

Newsletter Contributor Sept 2013 – Sept 2016
Association for Women in Science

Science Club Mentor Sept 2013 – May 2015
Mentoring in science of middle school kids for Chicago Public Schools and McCormick Boys & Girls Club.

Northwestern University Brain Awareness Organization. Apr 2013 – Aug 2015
Chicago Public Schools teacher training in neuroscience.

SOCIETIES AND MEMBERSHIPS

Society for Neuroscience 2009 – Present
American Heart Association 2012 – Present
Society for the Neural Control of Movement 2016 – Present

American Society of Biomechanics	2017 – Present
American Society for Neurorehabilitation	2018 – Present