CURRICULUM VITAE

Sook-Lei Liew, PhD, OTR/L

August 29, 2023

I. BIOGRAPHICAL INFORMATION

PERSONAL INFORMATION:

School/Division	Herman Ostrow School of Dentistry of USC Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy
Office Address	Mark and Mary Stevens Neuroimaging and Informatics Institute 2025 Zonal Avenue Los Angeles, CA 90089
Telephone	323-865-1755
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Website	http://npnl.usc.edu

UNIVERSITY EDUCATION:

Professional Education or Doctoral Education

2008-2012 **Ph.D. in Occupational Science, concentration in Cognitive Neuroscience**
Division of Occupational Science and Occupational Therapy
Brain and Creativity Institute, Dornsife College of Letters, Arts and Sciences
University of Southern California
Advisor: Dr. Lisa Aziz-Zadeh

2006-2008 **M.A. in Occupational Therapy**
Division of Occupational Science and Occupational Therapy
University of Southern California

Undergraduate Education

2002-2006 **B.A. in Kinesiology, concentration in Sports Medicine; B.A. in English (magna cum laude)**
Department of Kinesiology
Department of English
Rice University

POSTDOCTORAL TRAINING:

Training and Fellowships

2012-2014 **Postdoctoral Fellow**
Human Cortical Physiology & Stroke Neurorehabilitation Section
National Institute of Neurological Disorders and Stroke
National Institutes of Health
Advisor: Dr. Leonardo Cohen

2014 **Visiting Research Fellow**
Human Brain Physiology and Stimulation Laboratory
Department of Physical Medicine and Rehabilitation
Johns Hopkins School of Medicine
Advisor: Dr. Pablo Celnik

2013 **Visiting Research Fellow**
Applied Neurotechnology Laboratory
Institute of Medical Psychology and Behavioral Neurobiology
University of Tübingen
Advisor: Dr. Niels Birbaumer & Dr. Surjo Soekadar

ACADEMIC APPOINTMENTS:

2023-Present **Director**, PhD Program in Occupational Science
Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy,
University of Southern California

2021-Present **Associate Professor**
Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy,
Division of Biokinesiology and Physical Therapy, Ostrow School of Dentistry
Department of Neurology, Keck School of Medicine (Courtesy Joint Appointment)
Department of Biomedical Engineering, Viterbi School of Engineering (Courtsey Joint Appointment)
Neuroscience Graduate Program (Training Faculty)
University of Southern California

2015-Present **Director**
Neural Plasticity and Neurorehabilitation Laboratory
University of Southern California

2015-2021 **Assistant Professor**
Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy,
Division of Biokinesiology and Physical Therapy
Ostrow School of Dentistry
University of Southern California

2015-2021 **Assistant Professor (Training Faculty)**
Neuroscience Graduate Program
University of Southern California

2015-2021 **Assistant Professor (Courtesy Joint Appointment)**
Department of Neurology
Keck School of Medicine
University of Southern California

2018-2021 **Assistant Professor (Courtesy Joint Appointment)**
Department of Biomedical Engineering
Viterbi School of Engineering
University of Southern California

AFFILIATION APPOINTMENTS:

2015-Present **Faculty Member Affiliate**
Mark and Mary Stevens Neuroimaging and Informatics Institute
University of Southern California

2016-Present **Researcher**
Rancho Research Institute
Rancho Los Amigos National Rehabilitation Center

II. SCHOLARLY ACTIVITIES

GRANTS AWARDED:

External Grants (Federal/Corporate Funding)

Principal Investigator/Co-Principal Investigator

CURRENT

12/2022-11/2023 **National Science Foundation**
Convergence Accelerator Track H
Award: 2236320
Role: Co-Principal Investigator
Title: NSF Convergence Accelerator Track H: Determining Community Needs for Accessibility Tools that Facilitate Programming Education and Workforce Readiness for Persons with Disabilities
Percentage of Effort: 10%
Funding: $698,161
Overall Aims: This convergence accelerator proposal aims to identify facilitators and barriers for persons with disabilities to learn and apply workforce ready programming by creating innovative hardware and software solutions to enable access to computer programming.

03/2022-02/2027 **National Institute for Child Health & Human Development (NICHD/NIH)**
Research Educational Program
Award: R25 HD105583
Role: Principal Investigator
Title: Building a Data Science Workforce to Improve the Reproducibility of Rehabilitation Research
Percentage of Effort: 10%
Funding: $811,564
Overall Aims: This research education program will build a sustainable national workforce of rehabilitation researchers equipped with basic data science skills by implementing an innovative, hands-on bootcamp for rehabilitation researchers to learn beginning data science skills and by using a train-the-trainer model to rapidly increase capacity for data science in the rehabilitation research community.

04/2020-03/2025 **National Institute of Neurological Disorders and Stroke (NINDS/NIH)**
Research Project Grant
Award: R01 NS115845
Role: Principal Investigator
Title: Effects of Global Brain Health on Sensorimotor Recovery after Stroke
Percentage of Effort: 25%
Funding: $3,115,396
Overall Aims: The objective of this five-year research grant is to examine the neurobiology of post-stroke recovery within three weeks and three months after stroke. Specifically, this grant will examine the influence of measures of global brain health (e.g., structural atrophy, white matter hyperintensities, perivascular spaces) on stroke recovery using both retrospective data collected through my role as chair of the ENIGMA Stroke Recovery working group, and prospective data from N=144 collected across four geographically diverse research sites.

COMPLETED

04/2021-03/2022 **National Institute of Neurological Disorders and Stroke (NINDS/NIH)**
Research Project Grant Supplement
Award: R01 NS115845-02S1
Role: Principal Investigator
Title: Supplement to Effects of Global Brain Health on Sensorimotor Recovery after Stroke
Funding: $82,459

04/2017-12/2020 **National Institute for Child Health & Human Development (NICHD/NIH)**
Mentored Career Development Grant
Award: K01 HD091283
Role: Principal Investigator
Title: Big Data Neuroimaging to Predict Motor Behavior after Stroke
Percentage of Effort: 75%

Funding: $532,764
Overall Aims: The objective of this four-year mentored career development award is to meta-analyze MRI and behavioral data from thousands of individuals after stroke by bringing together data from research and clinical sites worldwide as the chair of the ENIGMA Stroke Recovery consortium.

04/2018-12/2020 **National Institute of Aging (NIA/NIH)**
Administrative Supplement to K01 HD091283
Role: Principal Investigator
Funding: $269,551
Supplement Aims: The goal of this administrative supplement is to apply the big data neuroimaging approach developed in my K01 to explore cross-disorder relationships between stroke recovery and Alzheimer's disease and related dementias.

09/2017-08/2019 **US Army Research Office**
Award: W911NNF-14-D-0005
Role: Co-Principal Investigator (PI: D. Krum)
Title: Cortically Coupled Computing for Augmented Reality
Percentage of Effort: 5%
Funding: $1,100,000
Overall Aims: This funding supported innovative work to develop and assess novel virtual and augmented reality platforms integrated with brain computer interfaces to enhance human military performance.

01/2016-12/2018 **American Heart Association (AHA)**
National Innovative Research Grant
Award: 16IRG26960017
Role: Principal Investigator
Title: REINVENT: A Closed-Loop VR Neurofeedback System for Motor Recovery after Severe Stroke
Percentage of Effort: 20%
Funding: $149,446
Overall Aims: This novel project aimed to develop and test a portable, affordable brain computer interface for individuals with severe stroke. It uses 3D-printed components for electroencephalography and electromyography and provides biological feedback via immersive virtual reality.

12/2016-06/2017 **NIH Center for Large Data Research and Data Sharing in Rehabilitation (CLDR)**
Category 2 (Data Sharing and Archiving) Pilot Grant
Award: P2CHD065702
Role: Principal Investigator
Title: ATLAS: Anatomical Tracings of Lesions after Stroke

Funding: $10,000
Overall Aims: The goal of this Category 2 Pilot award was to develop and archive an open source large dataset (N>300) of manually segmented lesions and T1-weighted MRI images from individuals after stroke.

09/2016-12/2016 **NIH BD2K Centers Coordination Center Hackathon Grant**
Role: Principal Investigator
Title: Brainhack LA 2016: Big Data Tools for Connectomics
Funding: $3,000
Overall Aims: This grant supported a neuroscience hackathon that I organized, which brought together two NIH BD2K centers (ENIGMA, Big Data to Knowledge) and one NIH P41 center (Center for Reproducible Neuroimaging) and focused on developing open source tools for managing big data connectomics research (genomics, neuroimaging connectomics, and more).

05/2014-12/2014 **National Institute of Neurological Disorders and Stroke (NINDS/NIH)**
Intramural Competitive Fellowship Award (F32 Equivalent)
Role: Principal Investigator
Title: Real-time fMRI Neurofeedback for Motor Recovery after Stroke
Funding Offered: $147,660
Overall Aims: This three-year competitive postdoctoral fellowship supported my work testing a novel real-time fMRI connectivity-based brain computer interface for individuals with stroke. The award period was shortened due to my accepting and transitioning to a faculty position in 01/2015.

09/2013-10/2013 **German Academic Exchange Service (Deutscher Akademischer Austauschdienst; DAAD)**
Research Grant
Role: Principal Investigator
Title: Real-time fMRI Neurofeedback for Motor Recovery after Stroke
Funding: $3,000
Overall Aims: This two-month competitive research award supported my ability to work in Germany on developing the methods for a novel real-time fMRI connectivity-based brain computer interface for individuals with stroke.

08/2009-07/2012 **National Science Foundation**
Graduate Research Fellowship
Award: NSF 2009072048
Role: Principal Investigator
Title: Experience-dependent Modulations of the Action Observation

Network using fMRI
Funding: $124,000
Overall Aims: This work used functional MRI to explore changes in the action observation network (comprised of premotor and parietal motor regions) following motor, visual, and social experiences.

06/2008-09/2008 **National Science Foundation**
East Asia & Pacific Summer Institutes
Award: NSF 0813067
Role: Principal Investigator
Title: Cultural Effects on the Neural Substrates for Empathy
Funding: $5,637
Overall Aims: This funding supported a summer research project in China, using fMRI to explore cultural effects on motor and social cognitive networks.

Project Principal Investigator

COMPLETED

01/2015-03/2017 **National Institute for Child Health & Human Development (NICHD/NIH)**
Rehabilitation Research Career Development (RRCD) Program
Award: K12 HD055929
Role: Project PI (*RRCD K12 Principal Investigator: K. Ottenbacher*)
Title: Noninvasive Brain Stimulation and Neuroimaging to Characterize and Stimulate Recovery after Stroke
Percentage of Effort: 75%
Funding Offered: $375,000
Overall Aims: The goals of this career development award were to use neuroimaging to identify potential neuroanatomical predictors of responsiveness to noninvasive brain stimulation after stroke. The award period was shortened due to my accepting and transitioning to an NIH K01 award in 04/2017.

Co-Investigator, Collaborator, or Consultant

COMPLETED

07/2017-03/2021 **National Institute for Child Health & Human Development and National Institute of Nursing Research (NICHD, NINR/NIH)**
Award: R01NR105591
Role: Co-Investigator and Site Principle Investigator (PIs: E.A. Holman, S.C. Cramer)
Title: Genetic Variations, Stress, and Functional Outcomes after Stroke Rehabilitation
Anticipated Funding: $25,988
Overall Aims: This project aims to examine how stress and genetic

makeup affect rehabilitation outcomes following stroke, using brain imaging, genetic analyses, and longitudinal behavioral assessments.

07/2017-06/2018 **National Science Foundation**
SBIR Phase I
Award: NSF 1721266
Role: Consultant (PI: B. Moeinzadeh)
Title: Augmented Reality for Arm and Hand Rehabilitation Post-stroke
Funding: $224,916
Overall Aims: This award supported the development and testing of novel commercial augmented reality systems to promote arm and hand rehabilitation after stroke.

Internal Grants (University Funding)

Principal Investigator

CURRENT

09/2019-08/2023 **USC Collaboration Award**
Role: Principal Investigator
Title: USC SensoriMotor Assessment and Rehabilitation Training in Virtual Reality Center (USC SMART-VR Center)
Funding: $90,000
Overall Aims: This grant supports the development and expansion the USC Center for SensoriMotor Assessment and Rehabilitation Training in Virtual Reality. This center brings together individuals from across the university for collaborative projects and center grant applications related to developing novel virtual technologies for healthcare.

COMPLETED

07/2022-06/2023 **USC Stevens Technology Advancement Grant**
Role: Principal Investigator
Title: REINVENT: A low-cost, mixed reality neurofeedback system for stroke rehabilitation
Funding: $100,000
Overall Aims: This grant supports the commercialization and technical development of REINVENT, a modular, telerehab-compatible brain and muscle computer interface for people with moderate to severe stroke.

06/2008-07/2009 **University of Southern California Provost's Ph.D. Fellowship**
Role: Principal Investigator
Funding Offered: $120,000
Overall Aims: This two-year fellowship supported work using functional MRI to explore changes in the action observation network (comprised of premotor and parietal motor regions) following motor, visual, and social experiences. The award period was shortened due to my accepting and

transitioning to an NSF Graduate Research Fellowship on 08/2009.

Co-Investigator, Collaborator, Consultant

COMPLETED

08/2020-09/2021 **USC Provost New Strategic Directions for Research Award**
Role: Co-Investigator (PI: V. Patel)
Title: Developing Actionable Insights for Maintaining Brain Health through Artificial Intelligence
Funding: $119,000
Overall Aims: This grant supports the development and application of deep learning methods to identify brain health measures across a clinically-diverse dataset of over 6,500 individuals.

11/2017-11/2018 **USC Division of Biokinesiology and Physical Therapy Seed Grant**
Role: Co-Investigator (PI: J. Finley)
Title: USC SensoriMotor Assessment and Rehabilitation Training in Virtual Reality Center (USC SMART-VR Center)
Funding: $15,000
Overall Aims: This grant supported the creation and development of a new USC Center for SensoriMotor Assessment and Rehabilitation Training in Virtual Reality. This center brought together individuals from around the university together for collaborative projects and center grant applications, and formed the basis for the funded USC Collaboration Award (2019-2022).

PUBLICATIONS:

Single asterisk indicates direct student mentee; underline indicates senior author on publication; † denotes *equal contributions.*

Peer-Reviewed Journal Articles – Original Research

2023

1. **Liew, S.-L.**, Schweighofer, N., Cole, J. H., Zavaliangos-Petropulu, A., Lo, B. P., Han, L. K. M., Hahn, T., Schmaal, L., Donnelly, M. R., Jeong, J. N., Wang, Z., Abdullah, A., Kim, J. H., Hutton, A., Barisano, G., Borich, M. R., Boyd, L. A., Brodtmann, A., Buetefisch, C. M., Byblow, W. D., Cassidy, J. M., Charalambous, C. C., Ciullo, V., Conforto, A. B., Dacosta-Aguayo, R., DiCarlo, J. A., Domin, M., Dula, A. N., Egorova-Brumley, N., Feng, W., Geranmayeh, F., Gregory, C. M., Hanlon, C. A., Holguin, J. A., Hordacre, B., Jahanshad, N., Kautz, S. A., Khlif, M. S., Kim, H., Kuceyeski, A., Lin, D. J., Liu, J., Lotze, M., MacIntosh, B. J., Margetis, J. L., Mataro, M., Mohamed, F. B., Olafson, E. R., Park, G., Piras, F., Revill, K. P., Roberts, P., Robertson, A. D., Sanossian, N., Schambra, H. M., Seo, N. J., Soekadar, S. R., Spalletta, G., Stinear, C. M., Taga, M., Tang, W. K., Thielman, G. T., Vecchio, D., Ward, N. S., Westlye, L. T., Winstein, C. J., Wittenberg, G. F., Wolf, S. L., Wong, K. A., Yu, C., Cramer, S. C., &

Thompson, P. M. (2023). Association of brain age, lesion volume and functional outcome in patients with stroke . *Neurology. (IF: 12.258)*

2. Ferris, J.K., Lo, B.P.*, Khlif, M.S., Brodtmann, A., Boyd, L.A., & **Liew, S.-L.** (2023). Optimizing automated white matter hyperintensity segmentation in individuals with stroke. *Frontiers in Neuroimaging.*

3. Varghese, R., Chang, B., Kim, B., **Liew, S.-L.,** Schweighofer, N., & Winstein, C. J. (2023). Corpus callosal microstructure predicts bimanual motor performance in chronic stroke survivors: A preliminary cross-sectional study. *Topics in Stroke Rehabilitation*, *30*(6), 626-634. *(IF: 2.177)*

4. Domin, M., Hordacre, B., Hok, P., Boyd, L. A., Conforto, A. B., Andrushko, J. W., ... **Liew, S.-L.**, & Lotze, M. (2023). White Matter Integrity and Chronic Poststroke Upper Limb Function: An ENIGMA Stroke Recovery Analysis. *Stroke*. *(IF: 8.3)*

5. Donnelly, M.*, Phanord, C.*, Marin-Pardo, O*, Jeong, J.*, Bladon, B.*, Wong, K.*, Abdullah, A.*, & **Liew, S.-L.** (In press) Acceptability of a telerehabilitation biofeedback system among stroke survivors: A qualitative analysis. *OTJR: Occupation, Participation, and Health. (IF: 1.632)*

6. Lo, B.P.*, Donnelly, M.R.*, Barisano, G., & **Liew, S.-L.** (In press). A standardized protocol for manually segmenting stroke lesions on high-resolution T1-weighted MR images. *Frontiers in Neuroimaging.*

2022

7. Hernandez Petzsche, M. R., de la Rosa, E., Hanning, U., Wiest, R., Valenzuela, W., Reyes, M., Meyer, M., **Liew, S.-L.,** Kofler, F., Ezhov, I., Robben, D., Hutton, A., Friedrich, T., Zarth, T., Bürkle, J., Baran, T. A., Menze, B., Broocks, G., Meyer, L., Zimmer, C., Boeckh-Behrens, T., Berndt, M., Ikenberg, B., Wiestler, B., & Kirschke, J. S. (2022). ISLES 2022: A multi-center magnetic resonance imaging stroke lesion segmentation dataset. *Scientific Data*, *9*(1), 762. https://doi.org/10.1038/s41597-022-01875-5. PMCID: PMC9741583. *(IF: 8.501)*

8. Conforto, A. B., **Liew, S. L.**, Luft, A. R., Kitago, T., Bernhardt, J., & Arenillas, J. F. (2022). Editorial: Understanding stroke recovery to improve outcomes: From acute care to chronic rehabilitation. *Frontiers in Neurology*, *13*, 1021033. https://doi.org/10.3389/fneur.2022.1021033. PMCID: PMC9552008.

9. Ard, T., Bienkowski, M.S., **Liew, S.-L.**, Sepehrband, F., Yan, L., & Toga, A.W. Integrating data directly into publications with augmented reality and web-based technologies - Schol-AR. *Scientific Data, 9*, 298. https://doi.org/10.1038/s41597-022-01426-y.

10. Marin-Pardo, O.*, Donnelly, M.R.*, Phanord, C.S.*, Wong, K.*, Pan, J.*, & **Liew, S.-L.** Functional and neuromuscular changes induced via a low-cost, muscle-computer interface for telerehabilitation: A feasibility study in chronic stroke. *Frontiers in Neuroergonomics, 33,* https://doi.org/10.3389/fnrgo.2022.1046695.

11. Juliano, J.A.*, Schweighofer, N., & **Liew, S.-L.** (2022). Increased cognitive load in immersive virtual reality during visuomotor adaptation is associated with decreased long-term retention and context transfer. *Journal of NeuroEngineering and Rehabilitation, 19*(1). doi: 10.1186/s12984-022-01084-6. PMCID: PMC9532821 *(IF: 5.945)*

12. Juliano, J.A.*, Phanord, C.*, & **Liew, S.-L.** (2022). Visual processing of actions directed towards three-dimensional objects in immersive virtual reality may involve holistic processing of object shape. *Frontiers in Virtual Reality, 3.* https://doi.org/10.3389/frvir.2022.923943

13. Varghese, R., Chang, B., Kim, B., **Liew, S.-L**., Schweighofer, N., & Winstein, C.J. Corpus callosal microstructure predicts bimanual motor performance in chronic stroke survivors: A preliminary cross-sectional study. (2022). *Topics in Stroke Rehabilitation, 20, 1-9.* 20:1-9. doi: 10.1080/10749357.2022.2095085. Epub ahead of print. PMID: 35856402. *(IF: 2.119)*

14. **Liew, S.-L.** †, Lo, B.* †, Donnelly, M. R.*, Zavaliangos-Petropulu, A.*, Jeong, J.*, Barisano, G., Hutton, A.*, Simon, J. P.*, Juliano, J. M.*, Suri, A.*, Ard, T., Banaj, N., Borich, M. R., Boyd, L. A., Brodtmann, A., Buetefisch, C. M., Cao, L., Cassidy, J. M., Ciullo, V., Conforto, A. B., Cramer, S. C., Dacosta-Aguayo, R., de la Rosa, E., Domin, M., Dula, A. N., Feng, W., Franco, A. R., Geranmayeh, F., Gramfort, A., Gregory, C., Hanlon, C. A., Hordacre, B., Kautz, S. A., Khlif, M. S., Kim, H., Kirschke, J., Liu, J., Lotze, M., MacIntosh, B. J., Mataro, M., Mohamed, F. B., Nordvik, J. E., Park, G., Pienta, A., Piras, F., Redman, S. M., Revill, K. P., Reyes, M., Robertson, A. D., Seo, N. J., Soekadar, S., Spalletta, G., Sweet, A., Telenczuk, M., Westlye, L. T., Winstein, C. J., Wittenberg, G. F., Wong, K. A., & Yu, C. (2022). A large, curated, open-source stroke neuroimaging dataset to improve lesion segmentation algorithms. *Scientific Data, 9*(320)*,* doi: 10.1038/s41597-022-01401-7. *(IF: 8.501)*

15. Zavaliangos-Petropulu, A.*, Lo, B.*, Donnelly, M. R.*, Schweighofer, N., Lohse, K., Jahanshad, N., Barisano, G., Banaj, N., Borich, M. R., Boyd, L. A., Buetefisch, C. M., Byblow, W. D., Cassidy, J. M., Charalambous, C. C., Conforto, A. B., DiCarlo, J. A., Dula, A. N., Egorova-Brumley, N., Etherton, M. R., Feng, W., Fercho, K. A., Geranmayeh, F., Hanlon, C. A., Hayward, K. S., Hordacre, B., Kautz, S. A., Khlif, M. S., Kim, H., Kuceyeski, A., Lin, D. J., Liu, J., Lotze, M., MacIntosh, B. J., Margetis, J. L., Piras, F., Ramos-Murguialday, A., Revill, K. P., Roberts, P. S., Robertson, A. D., Schambra, H. M., Seo, N. J., Shiroishi, M. S., Soekadar, S., Spalletta, G., Taga, M., Tang, W. K., Thielman, G. T., Vecchio, D., Ward, N. S., Westlye, L. T., Werden, E., Winstein, C. J., Wittenberg, G. F., Wolf, S. L., Wong, K. A., Yu, C., Brodtmann, A., Cramer, S. C., Thompson, P. M., & **Liew, S. L.** (2022). Chronic stroke sensorimotor impairment is related to smaller hippocampal volumes: An ENIGMA analysis. *JAHA: Journal of the American Heart Association,* 11:e025109. doi: 10.1161/JAHA.121.025109. *(IF: 5.501)*

16. Hayward, K., Ferris, J. K., Lohse, K. R., Borich, M. R., Borstad, A., Cassidy, J. M., Cramer, S. C., Dukelow, S. P., Findlater, S. E., Hawe, R. L., **Liew, S.-L.**, Neva, J. L., Stewart, J. C., & Boyd, L. A. (2022). Observational Study of Neuroimaging Biomarkers of Severe Upper Limb Impairment After Stroke. *Neurology*, doi: 10.1212/WNL.0000000000200517. *(IF: 9.901)*

17. Ekhtiari, H., Ghobadi-Azbari, P., Thielscher, A., Antal, A., Li, L. M., Shereen, A. D., Cabral-Calderin, Y., Keeser, D., Bergmann, T. O., Jamil, A., Violante, I. R., Almeida, J., Meinzer, M., Siebner, H. R., Woods, A. J., Stagg, C. J., Abend, R., Antonenko, D., Auer, T., Bächinger, M., Baeken, C., Barron, H. C., Chase, H. W., Crinion, J., Datta, A., Davis, M. H., Ebrahimi, M., Esmaeilpour, Z., Falcone, B., Fiori, V., Ghodratitoostani, I., Gilam, G., Grabner, R. H.,

Greenspan, J. D., Groen, G., Hartwigsen, G., Hauser, T. U., Herrmann, C. S., Juan, C.-H., Krekelberg, B., Lefebvre, S., **Liew, S.-L.**, Madsen, K. H., Mahdavifar-Khayati, R., Malmir, N., Marangolo, P., Martin, A. K., Meeker, T. J., Ardabili, H. M., Moisa, M., Momi, D., Mulyana, B., Opitz, A., Orlov, N., Ragert, P., Ruff, C. C., Ruffini, G., Ruttorf, M., Sangchooli, A., Schellhorn, K., Schlaug, G., Sehm, B., Soleimani, G., Tavakoli, H., Thompson, B., Timmann, D., Tsuchiyagaito, A., Ulrich, M., Vosskuhl, J., Weinrich, C. A., Zare-Bidoky, M., Zhang, X., Zoefel, B., Nitsche, M. A., & Bikson, M. (2022). A checklist for assessing the methodological quality of concurrent tES-fMRI studies (ContES Checklist): A consensus study and statement. *Nature Protocols,* 1-24. *(IF: 13.491)*

18. **Liew, S.-L.**, Zavaliangos-Petropulu, A.*, Jahanshad, N., Lang, C. E., Hayward, K. S., Lohse, K., Juliano, J. M.*, Assogna, F., Baugh, L. A., Bhattacharya, A. K., Borich, M. R., Boyd, L. A., Brodtmann, A., Buetefisch, C. M., Byblow, W. D., Cassidy, J. M., Conforto, A. B., Craddock, R. C., Dimyan, M. A., Dula, A. N., Ermer, E., Etherton, M. R., Fercho, K. A., Gregory, C. M., Hadidchi, S., Holguin, J. A., Hwang, D. H., Jung, S., Kautz, S. A., Khlif, M. S., Khoshab, N., Kim, B., Kim, H., Kuceyeski, A., Lotze, M., MacIntosh, B. J., Margetis, J. L., Mohamed, F. B., Piras, F., Ramos-Murguialday, A., Richard, G., Roberts, P., Robertson, A. D., Rondina, J. M., Rost, N. S., Sanossian, N., Schweighofer, N., Shiroishi, M. S., Soekadar, S. R., Spalletta, G., Stinear, C. M., Suri, A., Tang, W. K. W., Thielman, G. T., Vecchio, D., Villringer, A., Ward, N. S., Werden, E., Westlye, L. T., Winstein, C., Wittenberg, G. F., Wong, K. A., Yu, C., Cramer, S. C., & Thompson, P. M. (2022). The ENIGMA Stroke Recovery Working Group: Big data neuroimaging to study brain-behavior relationships after stroke. *Human Brain Mapping, 41,* 3839-3854. doi: 10.1002/hbm.25015 *(IF 4.421)*

19. Ito, K.L.*, Kim, B.K., Liu, J., Soekadar, S.R., Winstein, C.J., Yu, C., Cramer, S.C., Schweighofer, N., & **Liew, S.-L.** (2022). Corticospinal tract lesion load originating from both ventral premotor and primary motor cortices are associated with post-stroke motor severity. *Neurorehabilitation and Neural Repair, 36*(3), 179-182. *(IF 3.982).*

2021

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Peer-Reviewed Journal Articles – Other (Reviews, Perspectives)

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2. Gau, R., Noble, S., Heuer, K., Bottenhorn, K.L.,…**Liew, S.-L.**, … Xuo, X.-N. (2021). Brainhack: Developing a culture of open, inclusive, community-driven neuroscience. *Neuron, 109(*11*),* 1769-1775. *(IF 14.403*)

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Books, Chapters, and Practice Guidelines

1. **Liew, S.-L.**, Lin, D.J., & Cramer, S.C. (2021). Interventions to improve recovery after stroke. In: *Stroke: Pathophysiology, Diagnosis and Management, 7th Edition*. Editors: Grotta, Albers, Broderick, Kasner, Lo, Sacco, & Wong. Philadelphia: Elsevier.

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Published Abstracts

1. Marin-Pardo, O.*, Vourvopoulos, A.*, Neureither, M.*, Saldana, D.*, Jahng, E.*, & **Liew, S.-L.** (2019). Electromyography as a suitable input for virtual reality-based biofeedback in stroke rehabilitation. In: Stephanidis, C. (eds) *HCI International 2019 – Posters. Communications in Computer and Information Science,* vol 1032. Springer, Cham.

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4. **Liew, S.-L.,** Jahanshad, N., Anglin, J.*, Borges, V., Heydari, P., Aziz-Zadeh, L., Birbaumer, N., Borich, M., Boyd, L., Byblow, W., Craddock, C., Dimyan, M., Ermer, E., Goud, A., Lang, C.E., Li, J., Liu, J., Nichols, T., Ramos, A., Roberts, P., Sanossian, N., Stinear, C., Ward, N., Wang, J.,Westlye, L.T., Kuceyeski, A., Winstein, C.J., Wittenberg, G.F., Yu, C., Cramer, S.C., & Thompson, P.M. (2017). Effects of lesion laterality on post-stroke motor ability: An ENIGMA Stroke Recovery analysis. *Stroke*, 48, Issue Suppl 1, A14. *(IF 6.03)*

5. Ito, K.*, & **Liew, S.-L.** (2016). Calculating the laterality index using FSL for stroke neuroimaging data. *GigaScience, 5*, 14-15. doi: 10.1186/s13742-016-0147-0-n *(IF 7.46)*

6. Kan, E., Anglin, J.*, Borich, M., Jahanshad, N., Thompson, P, & **Liew, S.-L.** (2016). Facilitating big data meta-analyses for clinical neuroimaging through ENIGMA wrapper scripts. *GigaScience, 5,* 17-19. doi: 10.1186/s13742-016-0147-0-p *(IF 7.46)*

Dissertations and Theses

2012 **Liew, S.-L.** Experience modulates neural activity during action understanding: Exploring sensorimotor and social cognitive interactions. PhD Dissertation, University of Southern California.

Patents Pending

2022 **Liew, S.-L.**, Marin-Pardo, O., & Phanord, C. Neurofeedback rehabilitation system. International Patent Application PCT/US2022/017934, W02022183009A1. February 25, 2022.

2021 **Liew, S.-L.**, Marin-Pardo, O., & Phanord, C. Neurofeedback rehabilitation system. U.S. Patent Application No. 63,154,092. February 26, 2021.

News Releases

2022 "Are brain implants the future of computing?" The Economist. Available as of 12/15/2022 at: https://www.youtube.com/watch?v=BYxzrFyES6I

2022 "Major expansion of open-source neuroimaging data set to boost stroke recovery research." USC News. Available as of 06/27/2022 at: https://keck.usc.edu/major-expansion-of-open-source-neuroimaging-data-set-to-boost-stroke-recovery-research/

2020 "A trio of faculty members explore how VR can help combat neurological diseases." USC News. Available as of 08/04/2020 at: https://news.usc.edu/173412/neurological-diseases-vr-virtual-reality-alzheimers-parkinsons-stroke-usc-research/

2020 "The Keck School secures millions for new research on the aging brain." USC Health Science Campus News. Available as of 06/02/2020 at: https://hscnews.usc.edu/the-keck-school-secures-millions-for-new-research-on-the-aging-brain

2020 "Smart Squad." USC Provost News. Available as of 05/27/2020 at: https://www.provost.usc.edu/smart-squad/

2019 "Virtual reality changes your brain." Verizon News: Fourth Industrial Revolution. Available as of 12/03/2019 at: https://www.verizon.com/about/our-company/fourth-industrial-revolution/virtual-reality-changes-your-brain

2019 "How virtual reality may help stroke patients move their limbs." Voice of America. Available as of 11/06/2019 at: https://www.voanews.com/episode/how-virtual-reality-may-help-stroke-patients-move-their-limbs-4083196

2019 "Bailey Ballinger finds out how brains work." GoldiBlox and Fast Forward Girls. Available as of 08/28/2019 at: https://www.youtube.com/watch?v=oMUOaKZLq8E (799,905+ views)

2019 "Virtual reality research team earns USC Collaboration Fund grant." HSC News. Available as of 06/24/2019 at: https://hscnews.usc.edu/virtual-reality-research-team-earns-usc-collaboration-fund-grant/"

2018 "How virtual avatars help stroke patients improve motor function." PC Magazine. Available as of 3/8/2018 at: https://www.pcmag.com/news/359198/how-virtual-avatars-help-stroke-patients-improve-motor-funct

2018 "Largest open-source data set of brain MR exams of stroke patients now available for download." DOTmed Healthcare Business News. Available as of 02/23/2018 at: https://www.dotmed.com/news/story/41743

2018 "USC releases MRI stroke dataset to spur AI research." Health Data Management. Available as of 02/21/2018 at: https://www.healthdatamanagement.com/news/usc-releases-mri-stroke-dataset-to-spur-ai-research

2017 "VR could trick stroke victims' brains towards recovery." CNET. Available as of 10/15/2017 at: https://www.cnet.com/news/vr-could-trick-stroke-victims-brains-toward-recovery/

2017 "REINVENT: Leveraging virtual reality and neurofeedback to help with motor rehabilitation." IEEE Xplore Innovation Spotlight. Available as of 08/16/2017 at: http://ieeexplore-spotlight.ieee.org/article/motor-rehabilitation-virtual-reality-feedback/

2017 "Using virtual reality – and mom's sewing machine – for stroke rehab." USC News. Available as of 06/12/2017 at: https://news.usc.edu/122574/usc-researcher-uses-virtual-reality-and-her-mothers-sewing-machine-to-treat-stroke-survivors/

2017 "Patients can teach the next generation of doctors, experts at Stanford Medicine X say." Stanford University SCOPE Blog. Available as of 04/22/2017 at: http://scopeblog.stanford.edu/2017/04/22/working-together-in-health-care-why-its-hard-and-what-works/

2017 "Working together in health care: Why it's hard and what works." Santa Cruz Sentinal. Available as of 04/23/2017 at: http://www.santacruzsentinel.com/article/NE/20170423/NEWS/170429874

2017 "As the world of VR descends on SXSW, here are six must-see experiences." Forbes. Available as of 03/08/2017 at: https://www.forbes.com/sites/sethporges/2017/03/08/6-must-see-virtual-reality-experiences-at-this-years-sxsw/#7d63701f1bf3

2017 "Tech's new frontier: The human brain." Campaign. Available as of 03/17/2017 at: https://www.campaignlive.co.uk/article/techs-new-frontier-human-brain/1427743

2013 "All in the mind: Hone movement skills just by thinking." New Scientist. Available as of 11/15/2013 at: https://www.newscientist.com/article/dn24576-all-in-the-mind-hone-movement-skills-just-by-thinking/

2013 "Exercise for stroke patients' brains." Science Daily. Available as of 06/11/2013 at: https://www.sciencedaily.com/releases/2013/06/130611130953.htm

2012 "Too important to smile back: The 'Boss Effect'" Wall Street Journal. Available as of 10/15/2012 at: https://www.wsj.com/articles/SB10000872396390443624204578058854229152678

2012 "Avatars and the Mirrorbox: Can humans hack empathy?" KQED Quest. Available as of 07/31/2012 at: https://ww2.kqed.org/quest/2012/07/31/avatars-and-the-mirrorbox-can-humans-hack-empathy/

MAJOR PUBLIC PRESENTATIONS:

Invited, International

1. **Liew, S.-L.** (2023, January). How big data can move stroke recovery research forward: Lessons from ENIGMA Stroke Recovery. *Advances in Stroke Recovery.* Virtual platform.

2. **Liew, S.-L.** (2022, September). Big data neuroimaging for stroke recovery. *31st Annual Scientific Meeting of the Stroke Society of Australasia 2022.* Hybrid meeting: Christchurch, New Zealand and virtual platform.

3. **Liew, S.-L.** (2022, September). REINVENT: A brain and muscle computer interface for stroke rehabilitation. *31st Annual Scientific Meeting of the Stroke Society of Australasia 2022.* Hybrid meeting: Christchurch, New Zealand and virtual platform.

4. **Liew, S.-L.** (2022, September). Engaging the public in stroke rehabilitation research. *31st Annual Scientific Meeting of the Stroke Society of Australasia 2022.* Hybrid meeting: Christchurch, New Zealand and virtual platform.

5. **Liew, S.-L.** (2022, April). Data science and open science: Impact on reproducibility in stroke rehabilitation research. In webinar series on Big data: A game-changer to advance stroke care in the digital era. *World Stroke Academy.* Virtual Platform.

6. **Liew, S.-L.** (2021, October). ENIGMA Stroke Recovery: Large data for AI in stroke rehabilitation. *World Stroke Congress.* Virtual platform.

7. **Liew, S.-L.** (2021, October). ENIGMA Stroke Recovery: Large data for AI in stroke rehabilitation. *World Stroke Congress.* Virtual platform.

8. **Liew, S.-L.** (2021, April). Precision rehabilitation: Potential applications of neuroimaging for stroke rehabilitation. *Parallel Symposium II Speaker, 35th Annual Congress of the Korean Academy of Rehabilitation Medicine (KARM).* Seoul, Korea. Virtual platform.

9. **Liew, S.-L.** (2021, April). Brain computer interfaces and virtual reality. *International Society for Virtual Rehabilitation.* Virtual platform.

10. **Liew, S.-L.** (2021, March). Personalized rehabilitation: Big data neuroimaging and personalized treatments. *Distinguished Seminar Series, Imperial College London Biomedical Engineering Department*. London, UK. Virtual platform.

11. **Liew, S.-L.** (2021, January). Big data brain imaging, virtual reality and brain computer interfaces for stroke rehabilitation. *Brain Meetings Seminar Series, Computational, Cognitive and Clinical Neuroimaging Laboratory (C3NL), Imperial College London*. London, UK. Virtual platform.

12. **Liew, S.-L.** (2020, November). Machine learning for MRI analyses in stroke rehabilitation. *World Stroke Organization and European Stroke Organization Joint Meeting.* Vienna, Austria. Virtual platform.

13. **Liew, S.-L.** (2020, February). Moderator: How to identify target patient groups in stroke recovery and rehabilitation trials. ENIGMA Stroke Recovery Updates. *International Stroke Conference.* Los Angeles, CA

14. **Liew, S.-L.** (2019, June). ENIGMA Stroke Recovery Updates. *ENIGMA Chairs Annual Meeting*. Rome, Italy.

15. **Liew, S.-L.** (2017, September). Motor learning strategies and measurement. *7th International Symposium on Gait & Balance in Multiple Sclerosis: Neuroplasticity and Rehabilitation in M*S. Portland, OR.

16. **Liew, S.-L.** (2017, June). Chair, Oral session on Neuroinformatics. *Organization for Human Brain Mapping Annual Meeting.* Vancouver, Canada.

17. **Liew, S.-L.** (2017, June). ENIGMA Stroke Recovery Updates. *ENIGMA Chairs Annual Meeting – Data Blitz*. Vancouver, Canada.

18. **Liew, S.-L.** (2017, April). Occupational therapy, virtual reality and the brain. *Medicine X | ED.* Stanford, CA.

19. **Liew, S.-L.** (2016, June). ENIGMA Stroke Recovery. *ENIGMA Leaders Planning Meeting*. Geneva, Switzerland.

20. **Liew, S.-L.** (2016, June). Brain imaging, noninvasive brain stimulation and virtual reality for stroke rehabilitation. *MindMaze.* Lausanne, Switzerland.

Invited, National

21. **Liew, S.-L.** (2021, April). Big data analysis. *Research Intensive Programs in Physical Therapy of the American Council of Academic Physical Therapy.* Virtual platform.

22. **Liew, S.-L.** (2021, March). Big data and personalized approaches for stroke rehabilitation research. *Brain Health Institute's Seminar Series. Kent State University*, Kent, Ohio. Virtual platform.

23. **Liew, S.-L.** (2021, February). Big data brain imaging and personalized approaches for stroke rehabilitation research. *Biomedical Engineering Seminar Series. Arizona State University,* Tempe, Arizona. Virtual platform.

24. **Liew, S.-L.** (2020, November). Navigating research during the pandemic: Perspectives of PIs on pivots and challenges. Panel member. *American Occupational Therapy Foundation Webinar Series.* Virtual platform.

25. **Liew, S.-L.** (2020, October). Reproducibility in rehabilitation research and how data science (& open science) can help. Invited talk as part of symposium: Data Science. *NIH Rehabilitation Research 2020: Envisioning a Functional Future Meeting.* Virtual platform.

26. **Liew, S.-L.** (2020, May). Maximizing open data and data sharing during COVID-19. Invited talk as part of symposium: Research in the time of COVID-19: Strategies for moving things forward. *American Society for Neurorehabilitation Webinar Series.* Virtual platform.

27. **Liew, S.-L.** (2020, January). A large, open source dataset of stroke anatomical brain images and manual lesion segmentations (ATLAS). *Center for Large Data Research and Data Sharing in Rehabilitation (CLDR) Annual Meeting.* Galveston, TX.

28. **Liew, S.-L.** (2019, May). Big data neuroimaging for stroke recovery – ENIGMA Stroke Recovery. A*merican Society for Neuroradiology Annual Meeting.* Boston, MA.

29. **Liew, S.-L.** (2019, May). Big data neuroimaging approaches for stroke rehabilitation research. Massachusetts General Hospital (MGH) Stroke Research Center. Boston, MA.

30. **Liew, S.-L.** (2018, November). Virtual reality for neurorehabilitation. *AOTA Speciality Conference – Adult Rehabilitation.* Los Angeles, CA.

31. **Liew, S.-L.** (2018, November). Keynote panel: Creating synergies between clinicians and researchers for knowledge mobilization. *AOTA Speciality Conference – Adult Rehabilitation.* Los Angeles, CA.

32. **Liew, S.-L.** (2018, November). Panel on big data approaches to power trials in StrokeNet. Stroke Recovery Workshop: Bridging the translational gap in stroke recovery and rehabilitation research. Bethesda, MD.

33. **Liew, S.-L.** (2018, October). Big data brain imaging and virtual reality for stroke rehabilitation. Core for Advanced Magnetic Resonance Imaging (CAMRI) seminar. Baylor College of Medicine, Houston, TX.

34. **Liew, S.-L.** (2018, October). Big data brain imaging for stroke: ICPSR data depositors tell all. ICPSR Data Fair Webinar.

35. **Liew, S.-L.** (2018, July). Large data to identify neural substrates of post-stroke motor behavior. Progress in Clinical Motor Control I: Neurorehabilitation. State College, PA.

36. **Liew, S.-L.** (2018, May). A large, open source dataset of stroke anatomical brain images and manual lesion segmentations (ATLAS). NIH NCMRR MR3 Network Bi-Monthly Webinar.

37. **Liew, S.-L.** (2018, March). Big data neuroimaging, virtual reality, and neuromodulation for stroke rehabilitation. Shirley Ryan Ability Lab, Chicago, IL.

38. **Liew, S.-L.** (2018, January). Big data neuroimaging, virtual reality, and neuromodulation for stroke rehabilitation. Clinically Applied Rehabilitation Research and Engineering (CARE) Seminar. University of Texas at Austin, Austin, TX.

39. **Liew, S.-L.** (2016, September). Big data neuroimaging and neuromodulation to promote motor recovery after stroke. Medical University of South Carolina, Charleston, SC.

40. **Liew, S.-L.** (2015, February). Neuromodulation of the human motor system to enhance learning. Center of Execellence for Visual and Neurocognitive Rehabilitation, Emory University/Atlanta VA, Atlanta, Georgia.

41. **Liew, S.-L.** (2014, February). Modulating the motor network in healthy individuals and after stroke. Washington University School of Medicine, St. Louis, MO.

42. **Liew, S.-L.** (2013, December). Modulating the motor network in healthy individuals and after stroke. University of Washington, Seattle, WA.

43. **Liew, S.-L.** (2013, August). Modulating the motor network in healthy individuals and after stroke. The Ohio State University, Columbus, OH.

44. **Liew, S.-L.** (2013, April). Engaging the action observation network in healthy controls and individuals with stroke. Johns Hopkins University, Baltimore, MD.

45. **Liew, S.-L.** (2011, October). Experience-dependent modulations of action observation networks in healthy and clinical populations. Virginia Tech Carillion Research Institute, Roanoke, VA.

46. **Liew, S-L.** (2010, April). The EAPSI experience. Chair, Alumni Panel, National Science Foundation's East Asia & Pacific Summer Institutes. Washington, DC.

47. **Liew, S-L.** (2009, April). EAPSI China. National Science Foundation's East Asia & Pacific Summer Institutes, Washington, DC.

Invited, State/Regional/Local

48. **Liew, S.-L.** (2019, September). Big data brain imaging, brain stimulation and virtual reality for stroke rehabilitation. *USC Occupational Science Symposium.* Los Angeles, California.

49. **Liew, S.-L.** (2019, September). Innovation through collaboration for stroke rehabilitation. USC Inauguration of President Carol L. Folt. Los Angeles, California.

50. **Liew, S.-L.** (2018, November). Virtual reality and the brain. In.flux Reality Mixer. Los Angeles, California.

51. **Liew, S.-L.** (2018, November). Big data brain imaging, brain stimulation and virtual reality for stroke rehabilitation. Orange County Stroke Workshop. Orange, California.

52. **Liew, S.-L.** (2018, September). Virtual reality for stroke rehabilitation. *USC SMART-VR Symposium on Virtual Technologies for Health.* University of Southern California, Los Angeles, CA.

53. **Liew, S.-L.** (2018, April). Big data neuroimaging, virtual reality, and neuromodulation for stroke rehabilitation. Neurorehabilitation Seminar. University of Southern California, Los Angeles, CA.

54. **Liew, S.-L.** (2017, July). Neuroimaging and neuromodulation to promote motor recovery after stroke. Grand Rounds. Cedars Sinai Medical Center, Los Angeles, CA.

55. **Liew, S.-L.** (2017, May). Neuroimaging and neuromodulation to promote motor recovery after stroke. Grand Rounds. Rancho Los Amigos, Downey, CA.

56. **Liew, S.-L.** (2017, February). Large scale neuroimaging and neuromodulation to promote motor recovery after stroke. USC Biomedical Engineering Department Seminar, Los Angeles, CA.

57. **Liew, S.-L.** (2016, July). New and emerging technologies for clients with motor impairments due to neurological injury. Keynote speaker. *California Board of Occupational Therapy Annual Practice Forum.* Los Angeles, CA.

58. **Liew, S.-L.,** (2016, June). Brain imaging, noninvasive brain stimulation and virtual reality for stroke rehabilitation. Payoff, Irvine, California.

59. **Liew, S.-L**. (2015, March). Neuromodulation of the human motor system and implications for stroke rehabilitation. Keynote Speaker, *USC Herman Ostorow School of Dentistry Research Day.* Los Angeles, CA.

60. **Liew, S.-L.** (2014, April). New and emerging technologies for clients with motor impairments due to neurological injury. Invited speaker for Occupational Therapy Lunch with a Scholar, Johns Hopkins University, Baltimore, MD.

61. **Liew, S.-L.** (2014, February). Modulating the motor network in healthy individuals and after stroke. University of Southern California, Los Angeles, CA.

62. **Liew, S.-L.** (2013, March). New advances in stroke research. UCLA Southern California Stroke Recovery Group, Los Angeles, CA.

63. **Liew, S.-L.** (2012, September). Action observation and motor-related networks in chronic stroke patients. National Rehabilitation Hospital & Georgetown University, Washington D.C.

64. **Liew, S.-L.** (2011, November). Experience-dependent modulations of action observation networks in healthy and clinical populations. National Institute of Neurological Disorders and Stroke, NIH, Bethesda, MD.

65. **Liew, S.-L.** (2011, October). Experience and the action observation network. Social Cognitive Neuroscience Laboratory, Dr. Matthew Lieberman, UCLA, Los Angeles, CA.

66. **Liew, S.-L.** (2011, September). Who's the Boss: Cross-cultural differences in the workplace. Mindshare LA, general public audience of over 350. Los Angeles, CA.

67. **Liew, S.-L.** & Aziz-Zadeh, L. (2010, March). The neuroscience of daily social interactions. *USC Occupational Science 22nd Annual Symposium.* Los Angeles, CA.

Refereed, International

1. Vourvopoulos, A.*, Marin-Pardo, O.*, Neureither, M.*, Saldana, D.*, Jahng, E.*, & **Liew, S.-L.** (July 2019). Multimodal head-mounted virtual reality training and brain-computer interaction for stroke rehabilitation: A clinical case study with REINVENT. 21st I*nternational Conference on Human-Computer Interaction.* Orlando, FL.

2. **Liew, S.-L.** (2017, December). Immersive biologically-relevant neurofeedback in head-mounted virtual reality improves bci performance in healthy individuals. *3rd Real-Time Functional Imaging and Neurofeedback Conference.* Nara, Japan.

3. **Liew, S.-L.** (2017, March). Virtual reality and the brain. Panel discussion. *South By Southwest (SXSW).* Austin, TX.

4. **Liew, S.-L.** (2017, March). Virtual reality and the brain. Panel discussion. *IEEE Virtual Reality Conference.* Los Angeles, CA.

5. **Liew, S.-L.,** Jahanshad, N., Anglin, J.*, Borges, V., Heydari, P., Aziz-Zadeh, L., Birbaumer, N., Borich, M., Boyd, L., Byblow, W., Craddock, C., Dimyan, M., Ermer, E., Goud, A., Lang, C.E., Li, J., Liu, J., Nichols, T., Ramos, A., Roberts, P., Sanossian, N., Stinear, C., Ward, N., Wang, J., Westlye, L.T., Kuceyeski, A., Winstein, C.J., Wittenberg, G.F., Yu, C., Cramer, S.C., & Thompson, P.M. (2017, February). Effects of lesion laterality on post-stroke motor ability: An ENIGMA stroke recovery analysis. *International Stroke Conference.* Houston, TX.

6. **Liew, S-L.** (2010, July). Action understanding of physically different others and empathy correlations. Riken Brain Science Institute Summer Program, Tokyo, Japan.

Refereed, National

7. **Liew, S.-L.** (2020, October). Big data brain imaging and virtual reality for stroke rehabilitation. Refereed talk as part of symposium: Motor recovery after stroke. *American Congress of Rehabilitation Medicine Annual Conference.* Virtual platform.

8. **Liew, S.-L.** (2019, October). Reliability and reproducibility in neurorehabilitation research. Refereed symposium chair and speaker. *American Society for Neurorehabilitation Annual Meeting.* Chicago, IL.

9. **Liew, S.-L.** (2019, October). Machine learning for the large-scale segmentation of MRI images after stroke. Refeered talk as part of symposium: Structure in complexity: Using machine learning in neurorehabilitation research. *American Society for Neurorehabilitation Annual Meeting.* Chicago, IL.

10. Zavaliangos-Petropulu, A.* & **Liew, S.-L.** (2018, September). Large-scale stroke lesion analysis with the ATLAS dataset. *American Congress of Rehabilitation Medicine Annual Conference.* Dallas, TX.

11. Lefebvre, S.*, Jann, K., Schmiesing, A.*, Ito, K.*, Jog, M., Qiao, Y., Cabeen, R., Shi, Y., Schweighofer, N., Wang, D.J. & **Liew, S.-L.** (2018, August). Exploring tDCS-induced changes in motor network connectivity using HD-tDCS over primary motor versus premotor cortex. *NYC Neuromodulation Conference and NANS Summer Series.* New York, NY.

12. Ito, K.*, Kim, H. & **Liew, S.-L.** (2018, June). Facilitating big data rehabilitation research: A comparison of automated lesion segmentation approaches for stroke MRI data. *Occupational Therapy Summit of Scholars.* Kansas University Medical Center, Kansas City, KS.

13. Ito, K.L.*, **Liew, S.L.**, Garrison, K.A., Heydari, P., Sobhani, M., Werner, J., Damasio, H., Winstein, C.J., & Aziz-Zadeh, L. (April 2017). Does the side of stroke matter? An fMRI study on the role of stroke laterality on the action observation network. Selected for oral presentation as a Young Researcher at the *American Occupational Therapy Association Annual Conference*. Philadelphia, PA.

14. **Liew, S.-L.** (2016, November). 'Big data' for rehabilitation: Promises, pitfalls, and future potential. Refereed symposium chair and speaker. *American Society for Neurorehabilitation Annual Meeting.* San Diego, CA.

15. **Liew, S.-L.** (2016, May). ENIGMA Stroke Recovery: Using big data neuroimaging to predict motor recovery. *OT Summit of Scholars.* Pittsburgh, PA.

16. **Liew, S.-L.**, Thompson, T., Ramirez, J.J., Butcher, P., Cohen, L., Taylor, J.A., & Celnik, P.A. (2015, May). Anodal transcranial direct current stimulation of dorsolateral prefrontal cortex and cerebellum enhance visuomotor adaptation. *OT Summit of Scholars.* Los Angeles, CA.

17. **Liew, S.-L.,** Gonzalez-Castillo, J., Horovitz, S., Roopchansingh, V., Tinaz, S., Hallett, M., & Cohen, L.G. (2014, May). Using neurofeedback from real-time fMRI connectivity patterns to enhance skilled motor performance. *OT Summit of Scholars.* Philadelphia, PA.

18. **Liew, S.-L.,** Soekadar, S., & Cohen, L. (2014, April). Brain computer interfaces (BCIs) for neurorehabilitation: Evidence and applications for occupational therapy. Refereed short course, *American Occupational Therapy Association Annual Meeting.* Baltimore, MD.

19. **Liew, S.-L.** (2013, April). Stroke and the action observation network. Refereed research presentation, *American Occupational Therapy Association Annual Meeting.* San Diego, CA.

20. **Liew, S.-L.** & Aziz-Zadeh, L. (2009, October). Playing with words: The active role of language in everyday occupations. *Society for the Study of Occupations: USA Annual Meeting.* New Haven, CT.

Refereed, State/Regional/Local

21. **Liew, S.-L.**, Thompson, T., Ramirez, J.J., Butcher, P., Cohen, L., Taylor, J.A., & Celnik, P.A. (2014, December). Anodal tDCS of prefrontal cortex and cerebellum enhance different aspects of motor learning in a visuomotor adaptation task. Invited oral presentation, *Sensorimotor Research Day*. Johns Hopkins University, Baltimore, MD.

Peer-Reviewed Conference Posters

1. Zavaliangos-Petropulu, A.*, Tubi, M.A., Haddad, E., Zhu, A., Jahanshad, N., Thompson, P.M., & **Liew, S. L.** (2020, July). Automated hippocampal segmentation improved by convultional neural network approach in participants with history of cerebrovascular accident. *Alzheimer's Association International Conference*. Virtual platform.

2. Ito, K.L.*, Cao, L., Reinberg, R.*, Keller, B., Monterosso, J., Schweighofer, N., & **Liew, S-L.** (2020, June). Imbalanced dual systems of decision making in stroke. *Organization for Human Brain Mapping Annual Meeting*. Virtual platform.

3. Zavaliangos-Petropulu, A.*, Tubi, M.A., Haddad, E., Zhu, A., Braskie, M., Jahanshad, N., Thompson, P.M., & **Liew, S-L.** (2020, June). Hippocampal segmentation accuracy in a stroke population improves with a deep convolutional neural network approach. *Organization for Human Brain Mapping Annual Meeting*. Virtual platform.

4. **Liew, S-L.**, Kumar, A.*, Suri, A.*, Notter, M.P., Ito, K.*, Raamana, P., & Keshavan, A. (2019, October). Braindrles: A crowd-sourcing tool for stroke lesion segmentation quality control. *Society for Neuroscience Annual Meeting*. Chicago, IL.

5. Zavaliangos-Petropulu A*, Bhattacharya AK, Bigjahan B, Borich MR, Brown TR, Buetefisch CM, Byblow WD, Conforto AB, Craddock RC, Cramer SC, Dula AN, Gill k, Goud A, Hadidchi S, Holguin JA, Hwang DH, Khoshab N, Kim H, Kuceyeski A, Lang CE, Lotze M, MacIntosh BJ, Manzano M, Margetis JL, Ramos-Murguialday A, Roberts P, Robertson AD, Rondina JM, See K, Shiroishi MS, Stinear CM, Thielman G, Ward NS, Winstein C, Wittenberg GF, Wong KA, Jahanshad N, Thompson PM, **Liew, S.-L.** (2019, October).

Ipsilesional hippocampal volume is directly associated with motor performance in chronic stroke patients: An ENIGMA Stroke Recovery analysis. *Society for Neuroscience Annual Meeting.* Chicago, IL.

6. Zavaliangos-Petropulu, A.*, Jahanshad, N., Thompson, P.M., **Liew S.-L.** (2019, October). Corticospinal tract lesion load, but not lesion volume, improves hippocampal volume prediction model in chronic stroke patients. *American Society for Neurorehabilitation (ASNR) Annual Meeting.* Chicago, IL.

7. Marin-Pardo, O.*, Vourvopoulos, A.*, Neureither, M.*, Jahng, E.*, Saldana, D.*, & **Liew, S.-L.** (2019, October) Feasibility of electromyography biofeedback in stroke rehabilitation: A case series. *American Society for Neurorehabilitation (ASNR) Annual Meeting.* Chicago, IL.

8. Marin-Pardo, O.*, Vourvopoulos, A.*, Neureither, M.*, Saldana, D.*, Jahng, E.*, & **Liew, S.-L.** (2019, July). Electromyography as a suitable input for virtual reality-based biofeedback in stroke rehabilitation. *21st International Conference on Human-Computer Interaction*. Orlando, FL.

9. Juliano J.M.*, Saldana D.*, Schmiesing A.*, **Liew S.-L.** (2019, July). Experience with head-mounted virtual reality (HMD-VR) predicts transfer of HMD-VR motor skills. *International Conference for Virtual Rehabilitation.* Tel Aviv, Israel.

10. Zavaliangos-Petropulu A.*, Jahanshad N., Thompson P.M., **Liew S.-L.** (2019, June). Evaluating stroke lesion overlap with subcortical structures and post-stroke motor performance. *Organization for Human Brain Mapping Annual Meeting.* Rome, Italy.

11. Ito, K.L.*, Zavaliangos-Petropulu, A.*, Cramer, S.C. & **Liew, S-L.** (2019, June). Corticospinal tract lesion load from various motor origins predict motor outcome. *Organization for Human Brain Mapping Annual Meeting*. Rome, Italy.

12. Lefebvre, S.*, Jann, K., Schmiesing, A.*, Ito, K.*, Jog, M., Qiao, Y., Cabeen, R., Shi, Y., Schweighofer, N., Wang, D.J. & **Liew, S.-L.** (2018, Nov) Changes in motor network physiology and complexity with HD-tDCS and fMRI. *Society for Neuroscience Annual Meeting*. San Diego, CA.

13. Juliano, J.*, Spicer, R., Saldana, D.*, Finnegan, C.*, Lefebvre, S.*, Jann, K., Ard, T., Santarnecchi, E., Krum, D., & **Liew, S.-L.** (2018, Nov) Embodiment improves performance on an immersive brain computer interface in head-mounted virtual reality. *Society for Neuroscience Annual Meeting*. San Diego, CA.

14. Saldana, D.*, Wathugala, M.*, Anglin, J.*, Chan, J.*, & **Liew, S.-L.** (2018, October) Mindfulness meditation effects on stroke survivors: A pilot study. *Occupational Therapy Association of California Annual Conference and Expo*. Pasadena, CA.

15. Vourvopoulos, A.*, Marin-Pardo, O.*, Neureither, M.*, Singh, H.*, & **Liew, S.-L.** (2018, Sept) REINVENT 3.0: Multimodal virtual reality and brain-computer interfacing for stroke rehabilitation. *USC SMART-VR Symposium on Virtual Technologies for Health.* Los Angeles, CA.

16. Marin-Pardo, O.*, Vourvopoulos, A.*, Singh, H.*, Neureither, M.*, & **Liew, S.-L.** (2018, Sept) Flexible architecture for EMG acquisition for a virtual reality-based brain computer interface. *USC SMART-VR Symposium on Virtual Technologies for Health.* Los Angeles, CA.

17. Lefebvre, S.*, Jann, K., Schmiesing, A.*, Ito, K.*, Jog, M., Qiao, Y., Cabeen, R., Shi, Y., Schweighofer, N., Wang, D.J. & **Liew, S.-L.** (2018, Aug) Exploring tDCS-induced changes in motor network connectivity using HD-tDCS over primary motor versus premotor cortex. *NYC Neuromodulation Conference and NANS Summer Series.* New York, NY. *Selected for an oral highlight presentation.

18. Ito, K.*, Garrison, K., Heydari, P., Sobhani, M., Werner, J., Winstein, C., Aziz-Zadeh, A., & **Liew, S.-L.** (2018, June) Effective connectivity of the ipsilesional action observation network after stroke. *Organization for Human Brain Mapping Annual Meeting*. Singapore.

19. Lefebvre, S.*, Jog, M., Schweighofer, N., Wang, D.J., & **Liew, S.-L.** (2018, June) Exploring tDCS-induced changes in brain network connectivity when targeting M1 or PMD using HD-tDCS. *Organization for Human Brain Mapping Annual Meeting*. Singapore

20. Ito, K.*, Kim, H. & **Liew, S.-L.** (2018, Apr) Evaluating automated lesion segmentation approaches for stroke MRI data. *USC Herman Ostrow School of Dentistry Research Day*. Los Angeles, CA. *Awarded 2nd place.

21. Saldana, D.*, Wathugala, M.*, Anglin, J.*, Chan, J.*, & **Liew, S.-L.** (2018, Apr) Mindfulness meditation effects on stroke survivors: A pilot study. *USC Herman Ostrow School of Dentistry Research Day*. Los Angeles, CA.

22. Marin-Pardo, O.*, Anglin, J.*, Spicer, R., Krum, D.M., & **Liew, S.-L.** (2018, Mar) A new flexible architecture for a virtual reality-based brain computer interface. *Grodins USC Engineering Symposium*. Los Angeles, CA.

23. Hayward, K.S., Ferris, J.K., Lohse, K.R., Cramer, S.C., Borich, M.R., Steward, J.C., Borstad, A., Cassidy, J., Dukelow, S., Findlater, S., Neva, J.L., **Liew, S.-L.,** & Boyd, L.A. (2017, Nov) Regional diffusion differences in people with severe upper limb impairment post-stroke: A preliminary neuroimaging mega-analysis. *Society for Neuroscience Annual Meeting.* Washington, D.C.

24. Ito, K.*, Kim, H., & **Liew, S.-L.** (2017, Nov) A comparison of automated lesion segmentation approaches for stroke MRI data. *American Society of Neurorehabilitation Annual Meeting.* Baltimore, MD.

25. Zavaliangos-Petropulu, A.*, Jahanshad, N., Ching, C.R.K., Isaev, D., Ragothaman, A., Gutman, B., Kim, B., Robertson, A.D., Rondina, J.M., Aziz-Zadeh, L., Byblow, W.D., Cramer, S.C., Domin, M., Kautz, S.A., Kuceyeski, A., Lang, C.E., Liu, J., Lotze, M., MacIntosh, B.J., Ramos- Murguialday, A., Roberts, P., Stinear, C.M., Thielman, G., Wang, J., Winstein, C., Wittenberg, G., Yu, C., Thompson, P.M., & **Liew, S.-L.** (2017, Nov) Subcortical brain shape differences relate to post-stroke motor behavior. *American Society of Neurorehabilitation Annual Meeting.* Baltimore, MD.

26. Anglin, J.M.*, Banks, N.W.*, Sondag, M., Ito, K.L.*, Kim, H., Chan, J.*, Ito, J*, Jung, C.*, Lefebvre, S.*, Nakamura, W.*, Saldana, D.*, Schmiesing, A.*, Tran, C.*, Vo, D.*, Ard, T., Heydari, P., Kim, B., Aziz-Zadeh, L., Cramer, S.C., Liu, J., Soekadar, S., Nordvik, J.-E., Westlye, L.T., Wang, J., Winstein, C.J., Yu, C., Ai, L., Koo, B., Craddock, R.C., Milham, M., Lakich, M., Pienta, A., Stroud, A., & **Liew, S.-L.** (2017, Nov). The Anatomical Tracings of Lesions After Stroke (ATLAS) Dataset – Release 1.1. *Society for Neuroscience Annual Meeting.* Washington D.C.

27. Ito, K.*, Garrison, K., Heydari, P., Sobhani, M., Werner, J., Damasio, H., Winstein, C., & Aziz-Zadeh, L., & **Liew, S.-L.** (2017, June). Functional interhemispheric connectivity is decreased after stroke during action observation. *Organization for Human Brain Mapping Annual Meeting.* Vancouver, Canada.

28. Ito, K.*, Garrison, K., Heydari, P., Sobhani, M., Werner, J., Damasio, H.,Winstein, C., & Aziz-Zadeh, L., & **Liew, S.-L.** (2017, June). Interhemispheric connectivity is decreased during action observation after stroke. *OT Summit of Scholars*. Boston, MA. Awarded Best Student Poster.

29. Spicer, R., Anglin, J.*, Krum, D., & **Liew, S.-L.** (2017, March). REINVENT: A low-cost, virtual reality brain-computer interface for severe stroke upper limb motor recovery. *IEEE Virtual Reality Conference.* Los Angeles, CA.

30. Anglin, J.*, Saldana, D.*, Schmiessing, A.*, & **Liew, S.-L.** (2017, March). Transfer of a skilled motor learning task between virtual and conventional training environments. *IEEE Virtual Reality Conference.* Los Angeles, CA.

31. **Liew, S.-L.,** Jahanshad, N., Anglin, J.*, Khoshab, N., Kim, B., Nakamura, W.*, Nhoung, H., Rondina, J., Tran, C.*, Borich, Mc., Boyd, L., Byblow, W., Dimyan, M., Ermer, E., Lang, C., Li, J., Nichols, T., Roberts, P., Sanossian, N., Soekadar S., Stinear, C., Ward, N., Westlye, L. T., Winstein, C., Wittenberg, G. F., Cramer, S. C., & Thompson, P. M. (2016, Nov). ENIGMA Stroke Recovery: Big data neuroimaging to predict motor recovery. *Society for Neuroscience Annual Meeting.* San Diego, CA.

32. Anglin, J.M.*, Sugiyama, T.*, & **Liew, S.-L.** (2016, Nov.). Visuomotor adaptation in head-mounted virtual reality versus conventional training. *Society for Neuroscience Annual Meeting.* San Diego, CA. Selected for Hot Topics.

33. **Liew, S.-L.,** Jahanshad, N., Anglin, J.*, Khoshab, N., Kim, B., Nakamura, W.*, Nhoung, H., Rondina, J., Tran, C., Borich, Mc., Boyd, L., Dimyan, M., Ermer, E., Lang, C., Li, J., Nichols, T., Roberts, P., Sanossian, N., Soekadar S., Ward, N., Westlye, L. T., Winstein, C., Wittenberg, G. F., Cramer, S. C., & Thompson, P. M. (2016, June). ENIGMA Stroke Recovery: Big data neuroimaging to predict motor recovery. *Organization for Human Brain Mapping Annual Meeting*. Geneva, Switzerland.

34. Ito, K.*, **Liew, S.-L.,** Garrison, K., Heydari, P., Sobhani, M., Werner, J., Damasio, H., Winstein, C., & Aziz-Zadeh, L. (2016, June). Laterality in the action observation network after stroke. *Organization for Human Brain Mapping Annual Meeting*. Geneva, Switzerland.

35. Heydari, P., **Liew, S.-L.,** Damasio, H., Winstein, C., & Aziz-Zadeh, L. (2016, June). Activity patterns in motor regions of chronic stroke patients for action observation, execution and imitation. *Organization for Human Brain Mapping Annual Meeting*. Geneva, Switzerland.

36. **Liew, S.-L.,** Jahanshad, N., Anglin, J.*, Khoshab, N., Kim, B., Nakamura, W.*, Nhoung, H., Rondina, J., Tran, C., Borich, M., Boyd, L., Dimyan, M., Ermer, E., Lang, C., Li, J., Nichols, T., Roberts, P., Sanossian, N., Soekadar S., Ward, N., Westlye, L. T., Winstein, C., Wittenberg, G. F., Cramer, S. C., & Thompson, P. M. (2016, May). ENIGMA Stroke Recovery: Big data neuroimaging to predict motor recovery. *NCMRR Moving Rehabilitation Forward Meeting*. Bethesda, MD.

37. Ito, K.L.*, **Liew, S.L.,** Garrison, K.A., Heydari, P., Sobhani, M., Werner, J., Damasio, H., Winstein, C.J., & Aziz-Zadeh, L. (2016, March). Lateralization of action observation network activity after stroke. *USC Herman Ostrow School of Dentistry Research Day*. Los Angeles, CA. Awarded Second Place in division.

38. **Liew, S.-L.**, Thompson, T., Ramirez, J.J., Butcher, P., Taylor, J.A., & Celnik, P.A. (2015, October). Difficulty of visual transformation modulates the contributions of explicit and implicit learning with and without tDCS. *Society for Neuroscience Annual Meeting.* Chicago, IL.

39. Dayan, E., Lopez-Alonso, V., **Liew, S.-L.,** & Cohen, L.G. (2015, October). Distributed anatomical substrates identified by pattern classification predict cortical excitability and inhibition. *Society for Neuroscience Annual Meeting*. Chicago, IL.

40. Dayan, E., **Liew, S.-L.,** & Cohen, L.G. (2015, June). Modular organization of reward networks in the human brain. *Organization for Human Brain Mapping Annual Meeting*. Honolulu, HI.

41. **Liew, S.-L.**, Rana, M., Cornelsen, S., Furtunato de Barros Filho, M., Birbaumer, N., Sitaram, R.,Cohen, L, & Soekadar, S. (2015, February). Improving cortico-subcortical communication after stroke. *2nd International Conference on Real-time Functional Imaging and Neurofeedback*, Gainesville, FL.

42. **Liew, S.-L.**, Ramirez, J.J., Butcher, P., Cohen, L., Taylor, J.A., & Celnik, P.A. (2014, November). Anodal tDCS of prefrontal cortex and cerebellum enhance different aspects of motor learning in a visuomotor adaptation task. *Society for Neuroscience Annual Meeting.* Washington, D.C.

43. **Liew, S.-L.,** Gonzalez-Castillo, J., Horovitz, S., Roopchansingh, V., Tinaz, S., Hallett, M., & Cohen, L.G. (2013, November). Using neurofeedback from real-time fMRI connectivity patterns to enhance skilled motor performance. *Society for Neuroscience Annual Meeting*, San Diego, CA. Selected for Neuroscience 2013 Hot Topics.

44. **Liew, S.-L.,** Garrison, K., Winstein, C., Cohen, L. & Aziz-Zadeh, L. (2013, June). Functional connectivity of the action observation network after stroke. *Organization of Human Brain Mapping Annual Meeting*. Seattle, WA.

45. **Liew, S.-L.,** Sheng, T., & Aziz-Zadeh, L. (2012, June). Observing actions performed by a congenital amputee activates one's own sensorimotor regions. *Organization of Human Brain Mapping Annual Meeting*. Beijing, China.

46. **Liew, S.-L.,** Garrison, K.A., Haldar, J., Winstein, C.J., Damasio, H., & Aziz-Zadeh, L. (2012, April). The mirror neuron system: Implications for occupational therapy and stroke rehabilitation. *American Occupational Therapy Association Annual Meeting*. Indianapolis, IN.

47. **Liew, S.-L.,** Garrison, K.A., Haldar, J., Roh, A., Winstein, C.J., Damasio, H., & Aziz-Zadeh, L. (2012, February). Structural neuroanatomy of lesioned brains in chronic stroke patients and correlations with functional activation of motor-related neural networks. *USC Herman Ostrow School of Dentistry Research Day*. Los Angeles, CA. Awarded First Place in division.

48. **Liew, S.-L.,** Garrison, K.A., Haldar, J., Winstein, C.J., Damasio, H., & Aziz-Zadeh, L. (2011, November). Structural neuroanatomy of lesioned brains in chronic stroke patients and correlations with functional activation of motor-related neural networks. *Society for Neuroscience Annual Meeting.* Washington, D.C.

49. **Liew, S.-L.,** Seckin, M., & Aziz-Zadeh, L. (2011, April). The effects of experience on the observation of novel effectors and empathy correlations. *Cognitive Neuroscience Society Annual Meeting*. San Francisco, CA.

50. **Liew, S.-L.,** Seckin, M., Johnson, A. & Aziz-Zadeh, L. (2011, February). The role of experience in understanding physically different others. *USC Herman Ostrow School of Dentistry Research Day*. Los Angeles, CA. Awarded First Place in division.

51. **Liew, S.-L.,** Dandekar, F., Epstein, D., & Aziz-Zadeh, L. (2010, November). The neural correlates of visual creativity. *Society for Neuroscience Annual Meeting.* San Diego, CA.

52. **Liew, S.-L.,** Sheng, T., & Aziz-Zadeh, L. (2010, April). The neural correlates of stigma for physical differences. *Cognitive Neuroscience Society Annual Meeting*. Montreal, Canada.

53. **Liew, S.-L.,** Sheng, T., & Aziz-Zadeh, L. (2010, February). The neural correlates of observing physical differences and empathy correlations. *USC Herman Ostrow School of Dentistry Research Day*. Los Angeles, CA. Awarded Second Place in division.

54. **Liew, S.-L.,** Han, S., & Aziz-Zadeh, L. (2009, October). Activation of mirror neuron and theory of mind systems is modulated by familiarity and individual differences in empathy. *Society for Neuroscience Annual Meeting*. Chicago, IL.

55. **Liew, S.-L.,** Aziz-Zadeh, L., & Han, S. (2009, April). Out of hand: How experience and race modulate neural correlates of gesture observation. *Cognitive Neuroscience Society Annual Meeting*. San Francisco, CA.

56. Aziz-Zadeh, L., Sheng, T., **Liew, S.-L.,** Bukowski, H., Damasio, H., & Damasio, A. (2009, April). Understanding and empathizing with dissimilar others: A case study of a congenital amputee. *Cognitive Neuroscience Society Annual Meeting.* San Francisco, CA.

57. **Liew, S.-L.,** Sheng, T., & Aziz-Zadeh, L. (2009, February). Mission impossible: An fMRI study of motor empathy for impossible actions in a woman with congenital limb deficiencies. *USC Herman Ostrow School of Dentistry Research Day*. Los Angeles, CA. Awarded Second Place in division.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

Member, Institute of Electrical and Electronics Engineers (IEEE)
Member, Society for Neuroscience (SFN)
Member, Organization for Human Brain Mapping (OHBM)
Member, American Occupational Therapy Association (AOTA)
Member, American Society for Neurorehabilitation (ASNR)
Member, The NeuroBureau

HONORS, AWARDS, FELLOWSHIPS:

2023	**Member,** American Occupational Therapy Foundation (AOTF) Academy of Research
2020-2021	**Fellow,** ReproNim/INCF Fellowship Program jointly sponsored by ReproNim: A Center for Reproducible Neuroimaging Computation (ReproNim) and the International Neuroinformatics Coordinating Facility (INCF)
2017	**Award,** Special Jury Recognition for Innovative Use of Virtual Reality Technology in the Field of Health, South by Southwest (SXSW) Interactive VR Festival
2016	**Fellow,** American Heart Association Research Leaders Academy
2015	**Mentee,** Training in Grantsmanship for Rehabilitation Research (TIGRR) Workshop
2015-2020	**Award,** NIH Loan Repayment Program Awardee/Renewal Awardee for Clinical Research
2012	**Award,** USC Penelope Louise Richardson Award for outstanding potential in fulfilling the role of a faculty member
2012	**Award,** USC Provost PhD Travel Award
2012	**Award,** OT Division Leadership Travel Award
2011	**Trainee,** FENS-IBRO Imaging Training Center, Lausanne/Geneva, Switzerland
2011	**Trainee,** UCLA Advanced Neuroimaging Training Program (NITP) Summer Course, Los Angeles, CA
2010	**Trainee,** Riken Brain Science Institute Summer Program, Tokyo, Japan
2011, 2012	**First Place,** USC School of Dentistry Research Day, Occupational Science Division
2009, 2010	**Second Place**, USC School of Dentistry Research Day, Occupational Science Division
2009	**Fellow,** Summer Institute in Cognitive Neuroscience, Santa Barbara, CA
2008	**Fellow,** National Science Foundation East Asia and Pacific Summer Institutes
2008	**Award**, USC Elizabeth June Yerxa Award for Excellence in Research
2008-2009	**Award,** USC Graduate Professionalism Initiative
2006-2008	**Scholarships & Honors (Master's Degree),** Asia Pacific Occupational Therapy Congress (APOTC) Travel Award, Hong Kong, 2008; International Society of

Occupational Science Student Delegate, 2007; Phi Theta Epsilon (National Occupational Therapy Honor Society), 2007-2008

2002-2006 **College Scholarships & Honors (Bachelor's Degree),** National Merit Scholarship, Freeman ASIA Scholarship, Target All-Around Scholarship, Rice University Humanities Scholarship, Rice University President's Honor Roll, Rice Academic Fellow, National Society of Collegiate Scholars

III. TEACHING ACTIVITIES

COURSES PRESENTED:

Spring 2023 **Instructor**
OT 699: Building Innovative Technologies that Promote Health and Occupational Engagement

Spring 2021 **Instructor**
OT 699: Building Innovative Technologies that Promote Health and Occupational Engagement

Fall 2016 **Instructor**
OT 515: Neuroscience of Behavior

Spring 2012 **Instructor**
OT 441: Foundation – Neuroscience

CURRICULUM DEVELOPMENT:

Spring 2023 **Developer, Instructor**
OT 699: Building Technologies that Promote Health and Occupational Engagement

Fall 2022 **Developer, Instructor**
Reproducible Rehabilitation Research Education Program (ReproRehab)

Spring 2021 **Developer, Instructor**
OT 699: Building Technologies that Promote Health and Occupational Engagement

Fall 2019 **Developer, Co-Instructor**
Chan Innovation Bootcamp Series

GUEST LECTURES PRESENTED:

2017- present **USC OT 579: Occupational Therapy in Adult Neurorehabilitation**

Spring (& Fall '20)	"Emerging technologies for clients with motor impairments due to neurological injury"
2017 - present Fall	**USC OT 250: Introduction to Occupational Science and Occupational Therapy** "Large scale neuroimaging and neuromodulation to promote motor recovery after stroke"
2018 - present Spring	**USC NSCI 525: Advanced Overview of Neurosciences II** "The parietal cortex", "The basal ganglia"
2016, 2020 Fall	**USC OT 405: Foundations of Occupation** "Emerging technologies for clients with motor impairments due to neurological injury"
Fall 2020	**ArtCenter Product Design 3: Inclusive by Design** "Inclusive design for stroke rehabilitation as a clinician and a researcher"
Fall 2020	**USC OT 515: Neuroscience of Behavior** "Big data brain imaging and virtual reality for stroke rehabilitation"
Summer 2020	**Emory University DPT 805: Principles of Motor Learning** "Virtual reality and imaging for motor learning and stroke rehabilitation"
Fall 2019	**USC OT 500: Clinical Problems in Occupational Therapy: Special Topics and Emerging Practices** "Use of technology in occupational therapy: Augmented and virtual reality"
Fall 2018	**USC BKN 553: Experimental Methods for the Analysis of Human Movement** "Neuroimaging"
Fall 2018	**USC Biokinesiology Survival Series** "Tools and platforms for reproducible and open science"
Fall 2017	**USC Chan Occupational Science Seminar** "Virtual reality for stroke rehabilitation"
Spring 2017	**USC Biomedical Engineering Seminar Series** "Large scale neuroimaging and neuromodulation to promote motor recovery after stroke"
Fall 2016	**USC NIIN 596: Current Topics in Neuroinformatics** "Neuroimaging and neuromodulation to promote motor recovery after stroke"
Spring 2016	**USC OT 599: Occupation-Based Adult Neurorehabilitation** "Emerging technologies for clients with motor impairments due to neurological injury"
2015-2018 Summer	**USC Chan Summer Occupational Therapy Immersion Program** "Emerging technologies for clients with motor impairments due to neurological injury"

Fall 2015	**USC BKN 553: Experimental Methods for the Analysis of Human Movement** "Magnetic Resonance Imaging"
Fall 2015	**University of Missouri THR 4970: Occupational Therapy Research Methods** "Emerging technologies for clients with motor impairments due to neurological injury"
Fall 2015	**USC NIIN 510: Fundamentals of Human Neuroimaging** "Brain computer interfaces and real-time fMRI for neurorehabilitation"

MENTORING ACTIVITIES:

Research Assistant Professors Mentored:

2019-2021 **Christopher Laine, PhD**, Biofeedback of Muscle Activity in Stroke

List of Postdoctoral Scholars Mentored:

2023-	**Octavio Marin-Pardo, PhD**, AI and ML for Big Data Neuroimaging in Stroke
2018-2019	**Athanasios Vourvopoulos, PhD**, Virtual Reality Brain Computer Interface for Stroke
2016-2019	**Stephanie Lefebvre, PhD**, Neural Predictors of Noninvasive Brain Stimulation

Graduate Students Mentored:

PhD Students, Committee Chair:

2023-	**Mahir Khan**, PhD in Neuroscience *Current Position:* PhD Student, Neuroscience Graduate Program *Research Interests:* Big data neuroimaging and ML for individuals after stroke
2022-	**Stuti Chakraborty**, PhD in Occupational Science, concentration in Neuroscience *Current Position:* PhD Student, USC Chan Division of OS/OT *Research Interests:* Big data neuroimaging for individuals after stroke
2019-	**Miranda Rennie**, PhD in Occupational Science, concentration in Neuroscience *Current Position:* PhD Student, USC Chan Division of OS/OT *Research Interests:* Clinical uses of virtual reality for individuals after stroke
2018-2022	**Julia (Anglin) Juliano**, PhD in Neuroscience *Current Position:* PhD Student, USC Neuroscience Graduate Program *Research Interests:* Motor learning in virtual reality in healthy individuals and after stroke

2017-2023 **Octavio Marin-Pardo**, PhD in Biomedical Engineering
Current Position: PhD Student, USC Biomedical Engineering Program
Research Interests: Muscle biofeedback in virtual reality for stroke rehabilitation

2016-2021 **Artemis Zavaliangos-Petropulu**, PhD in Neuroscience (Co-PI with Dr. Thompson)
Dissertation: A multi-site neuroimaging approach to studying hippocampal damage in chronic stroke
Current Position: Postdoctoral fellow, UCLA

2016-2021 **Kaori Ito**, PhD in Occupational Science, concentration in Neuroscience
Dissertation: Neural and psychosocial correlates of age-related differences in goal-directed and habitual decision-making
Current Position: Bioinformatics Research Scientist, Gilead Sciences, Inc.

PhD Students, Committee Chair/Member:

2022- **Katherine Loomis**, PhD in Occupational Science (PI: Dr. Shawn Roll), Qualifying Committee Member
Current Position: PhD Student, USC Chan Division of OS/OT
Research Interests: Research in hand injuries and rehabilitation

2022- **Angelo Bartsch**, PhD in Biokinesiology (PI: Dr. Francisco Valero-Cuevas), Qualifying Committee Member
Current Position: PhD Student, USC Chan Division of BKN/PT
Research Interests: Research in post-stroke neuromuscular coupling

2022- **Nushka Remec**, PhD in Neuroscience (PI: Dr. Beth Smith), Qualifying Committee Member
Current Position: PhD Student, USC Neuroscience Graduate Program
Research Interests: Neural correlates of grasp development in infants

2021- **Morgan Kelly**, PhD in Biokinesiology (PI: Dr. Kristan Leech), Qualifying Committee Member
Current Position: PhD Student, USC Division of BKN/PT
Research Interests: Cognitive influences on post-stroke gait

2020- **Sarah Kettlety**, PhD in Biokinesiology (PI: Dr. Kristan Leech), Qualifying Committee Member
Current Position: PhD Student, USC Division of BKN/PT
Research Interests: Biofeedback for post-stroke gait

2020-2022 **Buwen Yao**, PhD in Occupational Science (PI: Dr. Shawn Roll), Qualifying Committee Member
Research Interests: Research in hand injuries and rehabilitation

2018-2022 **Sandy Takata**, PhD in Occupational Science (PI: Dr. Shawn Roll), Committee Member
Research Interests: Novel use of sonography for hand tendon injuries

2016-2021 **Rini Varghese**, PhD in Biokinesiology (PI: Dr. Carolee Winstein), Qualifying Committee Member
Dissertation: Hemisphere-specific deficits in the control of bimanual movements after stroke
Current Position: Postdoctoral fellow, Johns Hopkins University

2018-2021 **Aram Kim**, PhD in Biokinesiology (PI: Dr. James Finley), Committee Member
Dissertation: Locomotor skill learning in virtual reality in healthy adults and people with Parkinson disease
Current Position: Postdoctoral fellow, Johns Hopkins University

2015-2020 **Sonja Fenske**, PhD in Neuroscience (PI: Dr. Jason Kutch), Committee Chair
Dissertation: Brain-based prediction of chronic pain progression: A longitudinal study of Urologic Chronic Pelvi Pain Syndrome using baseline resting state connectivity from the Periaqueductal Gray
Current Position: Postdoctoral fellow, Cedars-Sinai

2016-2019 **Alaa Albishi,** PhD in Biokinesiology (PI: Dr. Beth Fisher), Committee Member
Dissertation: Are there neuroanatomical and functional substrates associated with different representations of a single muscle?
Current Position: Faculty, Department of Rehabilitation Sciences – Physical Therapy Division, College of Applied Medical Sciences, King Saud University, Riyadh, Saudi Arabia

2018 **Brandalyn Riedel**, PhD in Neuroscience (PI: Dr. Paul Thompson), Committee Chair
Dissertation: Using neuroinformatics to identify genomic and proteomic markers of suboptimal aging and Alzheimer's disease
Current Position: Postdoctoral fellow, Indiana University, PI: Dr. Andrew Saykin

2017-2018 **Akira Nagamori**, PhD in Biokinesiology (PI: Dr. Francisco Valero-Cuevas), Qualifying Committee Member
Current Position: PhD Student, USC Division of BKN/PT
Research Interests: Contributions of musculotendon contraction dynamics to human force control and effects on tendinopathy

2016-2017 **Emily Kilroy**, PhD in Biokinesiology (PI: Dr. Lisa Aziz-Zadeh), Qualifying Committee Member
Current Position: PhD Student, USC Chan Division of OS/OT
Research Interests: Examination of the action observation network in children with autism and developmental disabilities

OTD Students, Faculty Mentor/Residency Supervisor:

2023-2024	**Aisha Abdullah**, OTD Resident [Faculty mentor and residency supervisor] *Capstone project:* Innovating in Health: The USC HealthTech Makerspace
2022-2023	**Melanie Inouye,** OTD Resident [Faculty mentor and residency supervisor] *Capstone project:* Bringing virtual reality into the community
2021-2022	**Zhizhuo Wang,** OTD Resident [Faculty mentor and residency supervisor] *Capstone project:* Big data neuroimaging for stroke rehabilitation
2021-2022	**Kira Wong,** OTD Resident [Faculty mentor and residency supervisor] *Capstone project:* Virtual reality for stroke rehabilitation
2020-2021	**Julie Lutz,** OTD Resident [Faculty mentor and residency supervisor] *Capstone project:* Virtual reality for stroke rehabilitation
2018-2019	**Meghan Neureither,** OTD Resident [Faculty mentor and residency supervisor] *Capstone project:* Novel technologies for stroke rehabilitation

Master's and Professional Students, Advising and Research Mentorship:

2023-	**Emily Marks**, Entry-level OTD Student, Graduate Research Assistant
2023-	**Rosie Blanco**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2023-	**Lahari Muthyala**, Master of Science, Computer Science, Graduate Research Assistant
2023-	**Alan Wu**, Doctor of Physical Therapy, DPT Mentee
2022-2023	**Grace Song**, Entry-level OTD Student, Graduate Research Assistant
2022-2023	**Yeuk Yin Yu**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2022	**Sanying Yi**, Master of Science, Computer Science, Graduate Research Assistant
2022	**Swapnil Arya**, Master of Science, Computer Science, Graduate Research Assistant
2021-2023	**Aisha Abdullah**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2021-2023	**Kyle Nishimura**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2020-2022	**Jessica Jeong**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2020-2022	**Barrisford Bladon**, Master of Arts, Occupational Therapy, Research Assistant
2020-2022	**Kai Iwamoto**, Doctor of Physical Therapy, DPT Mentee
2019-2021	**Renee Reinberg**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2019-2022	**Tyler Isa**, Doctor of Physical Therapy, DPT Mentee
2018-2019	**Esther Jahng**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2018-2019	**Amit Kumar**, Master of Science, Computer Science, Research Assistant
2018-2019	**Harmeet Singh**, Master of Science, Computer Science, Research Assistant
2017-2020	**Kira Luzzo**, Doctor of Physical Therapy, DPT Mentee
2017-2019	**David Saldana**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2017	**Faisal Rashid**, Master of Science, Neuroimaging and Informatics, Research Assistant

2016-2018	**Melanie Wathugalu**, Keck School of Medicine, Medical Research Project Mentee
2016-2018	**Allie Schmiesing,** Master of Arts, Occupational Therapy, Graduate Research Assistant
2016-2017	**Jennifer Chan**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2016-2019	**Harrison Ma**, Doctor of Physical Therapy, DPT Mentee
2015-2018	**Cristi Magracia**, Doctor of Physical Therapy, DPT Mentee
2016-2017	**Nicholas Banks**, Master of Science, Stem Cell Biology, Research Assistant
2015-2017	**Catherine Tran**, Master of Science, Neuroimaging and Informatics, Research Assistant
2015-2016	**Kaori Ito**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2015-2016	**William Nakamura**, Master of Arts, Occupational Therapy, Graduate Research Assistant
2015	**Victoria Wong**, Master of Arts, Occupational Therapy, Graduate Research Assistant

Undergraduate Students:

2021-2023	**Jessica Pan**, Undergraduate in Neuroscience
2021-2022	**Jun Kim**, Undergraduate in Neuroscience
2019-2021	**Laura Cao**, Undergraduate in Computational Neuroscience
2017	**Catherine Finnegan**, Undergraduate in Psychology and Neuroscience
2016-2017	**Nicholas Banks**, Undergraduate in Biological Sciences
2016	**Danny Vo**, Undergraduate in Human Biology and Society, UCLA (summer intern)
2016	**Ryan Mori**, Undergraduate in Biology, Rice University (summer intern)

SELECTED HONORS AND AWARDS OF MENTEES:

2022	Octavio Marin-Pardo, USC Stevens Center for Innovation Most Disruptive Technology Award, Grodins Biomedical Engineering Symposium
2021-2022	Julia (Anglin) Juliano, Link Foundation Fellowship in Modeling, Simulation and Training Renewal
2020-2021	Julia (Anglin) Juliano, Link Foundation Fellowship in Modeling, Simulation and Training
2020	Jessica Jeong, Student Leadership Award for AOTA and NBCOT StudentCon
2019-2021	Sandy Takata, NIH F31 Ruth L. Kirchstein Predoctoral Individual National Research Service Award
2019-2020	Julia (Anglin) Juliano, NIH T32 Institutional Predoctoral Fellowship
2018-2019	Stephanie Lefebvre, USC Provost's Postdoctoral Scholar Research Grant
2019-2021	Rini Varghese, NIH F31 Ruth L. Kirchstein Predoctoral Individual National Research Service Award
2018	David Saldana, Allie Schmiesing, USC OT Division OTAC Student Leadership Award
2018	Kaori Ito, Neurohackademy Fellow (60 out of 400 applicants selected)
2018	Kaori Ito, 2nd Place Poster in OS/OT, USC School of Dentistry Research Day

2018	Stephanie Lefebvre, Research selected for Oral Highlight, NYC NANS Summer Series
2018-2019	Julia (Anglin) Juliano, USC Rose Hills PhD Fellowship
2018	Artemis Zavaliangos-Petropulu, Center for Large Data Research and Data Sharing in Rehabilitation Travel Award for Secondary Data Analysis of Archived Studies
2018	Julia (Anglin) Juliano, 1st Place, American Heart Association Hackathon
2018	David Saldana, Allie Schmiesing, USC OT Division AOTA Travel Award
2018	David Saldana, Albert Schweitzer Fellowship
2018	David Saldana, Hispanic Scholarship Fund Award
2018	Julia (Anglin) Juliano, National Science Foundation Graduate Research Fellowship Honorable Mention
2018	David Saldana, USC Latino Alumni Association Scholarship
2018-2019	Aram Kim, Link Foundation Modeling, Simulation, and Training Fellowship
2017-2021	Octavio Marin-Pardo, USC-CONACyT PhD Fellowship
2017	Allie Schmiesing, Albert Schweitzer Fellowship
2017	David Saldana, USC Occupational Therapy Tony Pompelio Memorial Scholarship
2017	Julia (Anglin) Juliano, National Science Foundation Graduate Research Fellowship Honorable Mention
2017	Kaori Ito, James and Patricia Plumtree Scholarship
2017	Kaori Ito, AOTA Young Researcher Award
2017	Kaori Ito, 1st Place Poster at Occupational Therapy Summit of Scholars
2017	Kaori Ito, Occupational Therapy Summit of Scholars Student Travel Award
2016	Kaori Ito, USC Occupational Therapy Division "Distinguished Contribution to Research in Occupational Science and Occupational Therapy" Award
2016	Kaori Ito, Michelle Berro AOTA Travel Award
2016	Kaori Ito, 2nd Place Poster in OS/OT, USC School of Dentistry Research Day

IV. ADMINISTRATIVE AND SERVICE ACTIVITIES

UNIVERSITY SERVICE:

Chan Division of Occupational Science and Occupational Science

2020-2021	**Member,** Health and Safety Task Force (COVID-19)
2020	**Member,** Entry-level OTD Working Group (Catalysts for Innovative Transformation)
2019-2020	**Member,** Assistant/Associate Professor Search Committee
2018-2020	**Member,** Associate/Full Professor Search Committee
2018	**Member,** Strategic Planning Steering Committee

2017-2020 **Committee Member and Judge,** Mark and Semira Moshayedi Innovation Award

2017 **Judge,** USC School of Dentistry Research Day

2016 **Judge,** USC School of Dentistry Research Day

Division of Biokinesiology and Physical Therapy

2020- Advisory Board Member, **MS in Sports Science Program**

Keck School of Medicine

2016- **Executive Committee Member,** Center for Image Acquisition, Stevens Neuroimaging and Informatics Institute

2017-2018 **Assistant Professor Search Committee Member,** Center for Image Acquisition, Stevens Neuroimaging and Informatics Institute

2016-2017 **Director Search Committee Member,** Center for Image Acquisition, Stevens Neuroimaging and Informatics Institute

Viterbi School of Engineering

2017 **Judge,** Grodins Biomedical Engineering Research Symposium

USC Neuroscience Graduate Program

2016-2021 **Faculty Advisor**, Computational Motor Control and Learning Journal Club

2017-2019 **Faculty Advisor**, Distinguished Lecturer Series

University of Southern California

2020-2022 **Member**, USC Innovation Council

2020-2022 **Member**, USC Innovation Council: Culture of Innovation Committee

2018- **Co-Director**, USC Sensorimotor Assessment and Rehabilitation Training in Virtual Reality Center (SMART-VR Center)

2017-2021 **Faculty Advisory Committee Member,** Stevens Center for Innovation, USC

2021 **Reviewer**, USC Provost's Strategic Directions for Research Award Program

2019-2021 **Reviewer**, USC Stevens Technology Advancement Grant

2020 **Reviewer**, USC Keck School of Medicine Dean's Pilot Funding Program

2020 **Reviewer**, USC Collaboration Fund Program

2018 **Co-Organizer**, 1st Annual USC Virtual Technologies for Health Symposium

PROFESSIONAL SERVICE:

Professional Organizations

RESTORE Center

2020- **Scientific Advisory Board**

American Society for Neurorehabilitation

2019- **Board of Directors**

2019- **Education Committee**

Human Brain Mapping Student and Postdoc Executive Group

2015-2016 **Immediate Past Chair**

2014 **Chair**

2013 **Vice Chair**

2012-2013 **Social Coordinator**

EDITORIAL AND NATIONAL GRANT REVIEW ACTIVITIES:

Editor/ Associate Editor/ Academic Editor

2022- **Guest Editor,** *Special Issue: Recovery of Function After Acquired Neurological Injury, American Journal of Occupational Therapy*

2021-2022 **Editor,** *Special Issue: Understanding Stroke Recovery to Improve Outcomes: From Acute Care to Chronic Rehabilitation, Frontiers in Neurology*

2020- **Review Editor,** *Frontiers in Rehabilitation Sciences, Translational Research in Rehabilitation Section*

2019- **Associate Editor,** *Frontiers in Virtual Reality, Virtual Reality in Medicine Section*

2017-2019 **Editor,** *Special Issue: Collaborative Efforts for Understanding the Human Brain, Frontiers in Neuroinformatics*

2015-2016 **Executive Editor,** *Special Issue: Neural Enhancement for Independent Living, Journal of Motor Behavior*

Editorial Review Board

2016- *Journal of Motor Behavior*

Scientific Review for Journals

2023- *Trends in Neurosciences*

2020- *Cell Reports Medicine*

2020- *Neurology*

2020- *Expert Review of Medical Devices*
2019- *IEEE Journal of Biomedical and Health Informatics*
2018- *Neural Plasticity*
2018- *Journal of Clinical Neuroscience*
2017- *eNeuro*
2017- *Transactions on Neural Systems and Rehabilitation Engineering*
2016- *Neurorehabilitation and Neural Repair*
2016- *NeuroImage: Clinical*
2016- *Archives of Physical Medicine and Rehabilitation*
2015- *Cerebral Cortex*
2015- *Neuromodulation: Technology at the Neural Interface*
2015- *Journal of Neurophysiology*
2015- *Journal of Neural Engineering*
2015- *Brain Imaging and Behavior*
2015- *Frontiers in Cellular Neuroscience*
2015- *Journal of Motor Behavior*
2014- *Biological Psychiatry*
2014- *Frontiers in Neuroscience*
2014- *Journal of Cognitive Neuroscience*
2014- *Frontiers in Human Neuroscience*
2013- *Social Cognitive and Affective Neuroscience*
2012- *Human Brain Mapping*
2012- *Journal of Occupational Science*
2011- *NeuroImage*

National Grant Review

2023 National Institutes of Health (NIH)
Center for Scientific Review (CSR)
Special Emphasis Review Panel ZRG1-MOSS-C(02)

2020 National Institutes of Health (NIH)
National Institute of Child Health and Human Development (NICHD)
Special Emphasis Review Panel ZHD1 DSR-G(50) for NCMRR Early Career Research Awards (R03)

2020 VA Rehabilitation Research and Development Service (RR&D)
Scientific Merit Review Board subcommittee, Musculoskeletal/Orthopedic Rehabilitation

2019 National Institutes of Health (NIH)
National Institute of Child Health and Human Development (NICHD)

CHHD-K Function, Integration and Rehabilitation Sciences Subcommittee Review Panel

2018 National Institutes of Health (NIH)
National Institute of Neurological Disorders and Stroke (NINDS)
Special Emphasis Panel ZNS1 SRB-L (13) for Training and Career Development

2018 VA Rehabilitation Research and Development Service (RR&D)
Scientific Merit Review Board subcommittee, Musculoskeletal/Orthopedic Rehabilitation

2017 VA Rehabilitation Research and Development Service (RR&D)
Scientific Merit Review Board subcommittee, Musculoskeletal/Orthopedic Rehabilitation

OTHER SERVICE ACTIVITIES:

2018-2019 **Program Committee**, *11th International Conference on Virtual Worlds and Games for Serious Applications*

2016 **Instructor**, *Noninvasive Brain Stimulation Methods*, Continuing Ed Course

2014, 2015, 2016 **Chair,** Brainhack Los Angeles (2016), Brainhack Los Angeles, part of Brainhack Americas (2015), and Brainhack DC, part of Brainhack EDT (2014)

2008, 2009, 2011 **Chairperson of Judging Committee,** *Los Angeles County Science & Engineering Fair*

2007, 2011 **5th Grade Science Fair Mentor,** *USC Health Sciences Campus Science Fair*

2011 **NeurOnline Champion**, *Society for Neuroscience NeurOnline Communities*

2007-2016 **Rice Alumni Regional Coordinator & Young Alumni Ambassador,** *Association of Rice University Alumni*

OTHER PREVIOUS EMPLOYMENT:

2010-2012 **Occupational Therapist (OTR/L),** *Supplemental Health Care, Los Angeles, CA*
Level I Per Diem Occupational Therapist specializing in adult neurology and physical disabilities, geriatrics, and skilled nursing, with an emphasis on providing care as part of an interdisciplinary team.

2006-2012 **Graduate Research Assistant**
Brain and Creativity Institute
University of Southern California
Advisor: Dr. Lisa Aziz-Zadeh

2006-2009 **Personal Trainer / Group Fitness Instructor**
Bally Total Fitness

BOARD CERTIFICATION AND/OR LICENSURE:

Specialty Certification

Certified Strength and Conditioning Specialist
National Strength and Conditioning Association (NSCA) #200733611 *(2007-Current)*

Healthcare Provider CPR/AED Certified *(2007-Current)*
American Heart Association (AHA)

State Licensure

Licensed Occupational Therapist
California Board of Occupational Therapy (CBOT) #11066 *(2009-Current)*

National Licensure

Registered Occupational Therapist
National Board for Certification in Occupational Therapy (NBCOT) #259263 *(2009-Current)*