

Curriculum Vitae

Se-Woong Park, PhD

Assistant Professor
University of Texas at San Antonio
Department of Kinesiology,
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Education

Sep. 2008 – Jan. 2014 Doctor of Philosophy in Biology

Northeastern University, Boston, MA

Advisor: Dagmar Sternad, Ph.D.

Dissertation title: *Acquisition and retention of asymmetric bimanual skills: Behavioral correlates of neuroplasticity*

Sep. 2004 - Aug. 2006 Master of Science in Cognitive Science

Seoul National University, Seoul, Korea

Advisor: Kyoung-Min Lee, M.D., Ph.D.

Thesis title: *Correlation between phase synchronization of neuronal activity and clinical outcome of deep brain stimulation in patients with Parkinson's disease*

Mar. 1997 - Aug. 2004 Bachelor of Science in Physics

Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea

Early entrance after completing 2nd-year courses in high school

Advisor: Hawoong Jeong, Ph.D

Thesis title: *Comparison of the statistical properties in various linguistic networks*

Academic Appointments

- Aug. 2019 - present** Assistant Professor, Department of Kinesiology, University of Texas at San Antonio
- Dec. 2017 – Nov. 2021** Research Affiliate in the Sinha Lab, Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge, MA (PI: Prof. Pawan Sinha)
- Nov. 2019 – May 2020** Affiliate Faculty Member, the Autism Research Center, University of Texas at San Antonio
- Sep. 2017 – May 2019** Associate Research Scientist, Northeastern University, Boston, MA (PI: Prof. Dagmar Sternad)
- Oct. 2017 – Jan. 2019** Consultant in the Hillman Lab, Massachusetts General Hospital Institute of Health Professions (PI: Prof. Robert Hillman)
- Jan. 2014 – Aug. 2017** Postdoctoral Research Associate, Northeastern University, Boston, MA (PI: Prof. Dagmar Sternad)
- Sep. 2008 – Dec. 2013** Research Assistant, Northeastern University, Boston, MA (PI: Prof. Dagmar Sternad)
- Jan. 2007 – Apr. 2008** Research Assistant, the Smith-Kettlewell Eye Research Institute, San Francisco, CA (PIs: Profs. Edward L. Keller and Kyoung-Min Lee)

Honors and Awards

1. Travel Award; Biomechanics and Neural Control of Movement (BANCOM) Conference, Mt. Sterling, OH, June 12-17, 2016
2. Honorable Mention; Graduate Symposium, Biology department, Northeastern University, May 10, 2013
3. Finalist (1st runner-up); Research, Innovation and Scholarship Expo in Northeastern University, in Physical and life sciences, graduate level, March 22, 2013
4. Graduate Assistantship; Seoul National University. Fall 2004
5. Merit-based Scholarship; KAIST, Spring 1999

Accepted Grant Proposals

1. 2017 – 2018: NIH-R21-HD089731: Quantification of Predictive Motor Impairments in Individuals with ASD. Principal Investigators: Dagmar Sternad and Pawan Sinha. Included as key personnel (postdoc) and significant contributions to writing of proposal

2. 2018 Simons Foundation Autism Research Initiative (SFARI) Explorer Award (\$80,000 total): Principal Investigators: Dagmar Sternad and Pawan Sinha. Significant contributions to writing of proposal
3. 2019-2020 UTSA COEHD Faculty Research Award: Characterizing electroencephalographic changes during complex upper-limb skill acquisition and retention (\$5,000): Se-Woong Park. My role: Principal Investigator
4. 2021-2022 UTSA Vice Provost REDKE Seed Grant (INTRA): Characterizing predictive gaze patterns and brain activity in children with autism spectrum disorder (\$5,000): Se-Woong Park and Leslie Neely. My role: Principal Investigator
5. Spring 2022 HCaP Explorer Seed Grant: Effects of desensitization of plantar surface in children with autism spectrum disorder with atypical gait (\$5,000): Sakiko Oyama and Se-Woong Park. My role: Co-Investigator

Publications

* Corresponding author, + Student author under my supervision

Peer-reviewed Journal Articles

1. *Neely, L., Carnett, A., Quarles, J., MacNaul, H., **Park, S.**, Oyama, S., Chen, G., Desai, K., & Najafirad, P. (Accepted). Technology can make us more human? The case for integrated technology in applied behavior analysis. *Advances in Neurodevelopmental Disorders*.
 - Impact factor: Not available (journal established in 2017)
 - **Contribution:** Wrote draft (an essential paragraph), and edited the manuscript
2. *Van Stan J.H., **Park, S.-W.**, Jarvis, M., Stemple, J., Hillman, R., Sternad, D. (2021). Towards the clinical assessment of vocal motor skill: A virtual voice-controlled task based on the Vocal Function Exercises treatment protocol. *Journal of Speech Language Hearing Research*. 64 (1), 1-15.
 - 2020 Impact factor: 2.297, Q1 in Speech and Hearing
 - **Contribution:** Conceived the idea of the task model, designed the model, oversaw the data analysis, wrote a method section, and edited the manuscript
3. *Crozier, D., Zhang, Z., **Park, S.-W.** & Sternad, D. (2019). Gender Differences in Throwing Revisited: Sensorimotor Coordination in a Virtual Ball Aiming Task. *Frontiers in Human Neuroscience*. 13, 231.
 - 2020 Impact factor: 3.154, Q1 in Behavioral Neuroscience
 - **Contribution:** Supervised and validated data analysis, and edited the manuscript

4. *Zhang, Z., Guo, D., Huber, M.E., **Park, S.-W.**, & Sternad, D. (2018). Exploiting geometry of solution space to reduce sensitivity to neuromotor noise. *PLoS Computational Biology*. e1006013.
 - 2020 Impact factor: 4.712, Q1 in Computational Theory and Mathematics
 - **Contribution:** Initiated the study, supervised and validated data analysis, implemented devices, and edited the manuscript
5. *Van Stan, J.H., **Park, S.-W.**, Jarvis, M., Mehta, D.D., Hillman, R.E., Sternad, D. (2017). Measuring vocal motor skill with a virtual voice-controlled slingshot. *Journal of the Acoustical Society of America*. 142(3), 1199-1212.
 - 2020 Impact factor: 1.84, Q1 in Acoustics and Ultrasonics
 - **Contribution:** Conceived the idea of the task model, designed the model, oversaw the data analysis, wrote a method section, and edited the manuscript
6. ***Park, S.-W.**, Hogan, N., Marino, H., Charles, S.K., Sternad, D. (2017). Moving slowly is hard for humans: Limitations of dynamic primitives in human motor control. *Journal of Neurophysiology*. 118(1), 69-83.
 - 2020 Impact factor: 2.63, Q2 in Neuroscience (Misc.)
 - **Contribution:** Collected and analyzed data, wrote draft and edited the manuscript
7. Chu, V.W., ***Park, S.-W.**, Sanger, T., & Sternad, D. (2016). Children with dystonia can learn a novel motor skill: Strategies that are tolerant to high variability. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 24(8), 847-858.
 - * Corresponding author
 - 2020 Impact factor: 3.802, Q1 in Rehabilitation
 - **Contribution:** Collected and analyzed data, revised and edited the manuscript
8. ***Park, S.-W.**, & Sternad, D. (2015). Robust retention of individual sensorimotor skill after self-guided practice. *Journal of Neurophysiology*, 113(7), 2635-2645.
 - 2020 Impact factor: 2.63, Q2 in Neuroscience (Misc.)
 - **Contribution:** Designed the study, collected and analyzed data, revised and edited the manuscript
9. **Park, S.-W.**, Dijkstra, T.M.H., & *Sternad, D. (2013). Learning to never forget—time scales and specificity of long-term memory of a motor skill. *Frontiers in Computational Neuroscience*, 7, 111.
 - 2020 Impact factor: 2.99, Q2 in Neuroscience (Misc.)
 - **Contribution:** Analyzed data, wrote draft, and edited the manuscript

10. *Sternad, D, **Park, S.-W.**, Müller, H., & Hogan, N. (2010). Coordinate dependence of variability analysis. *PLoS Computational Biology*, 6(4), e1000751.
 - 2020 Impact factor: 4.712, Q1 in Computational Theory and Mathematics
 - **Contribution:** Analyzed data and edited the manuscript
11. *Keller, E.L., Lee, K.-M., **Park, S.-W.**, & Hill, JA. (2008). The effect of inactivation of the cortical frontal eye field on saccades generated in a choice response paradigm. *Journal of Neurophysiology*, 100(5), 2726-2737.
 - 2020 Impact factor: 2.63, Q2 in Neuroscience (Misc.)
 - **Contribution:** Collected and analyzed data

Articles under Review

1. ***Park, S.-W.**, Cardinaux, A., Crozier, D., Kjelgaard, M., Sinha, P., & Sternad, D. Developmental change of predictive motor skills. Under revision at iScience
 - 2021 Impact factor: 6.107, Q1 in Multidisciplinary
 - **Contribution:** Designed the study, collected and analyzed data, wrote draft, and edited the manuscript
2. *Neely, L., Carnett, A., Quarles, J., **Park, S.**, Kelly, M. Behavior analytic technologies mediated via augmented reality for autism: A systematic review. Under review at the Review Journal of Autism and Developmental Disorders.
 - 2020 Impact factor: 2.600, Q2 in Psychiatry and Mental Health
 - **Contribution:** Wrote draft (an essential paragraph and table), and edited the manuscript
3. Umeda, M., Kim, Y., **Park, S.**, Chung, E., & Ullevig, S. Food insecurity and academic function among college students during the COVID-19 pandemic: A moderating role of first-generation college student status. Under revision at Journal of American College Health
 - 2020 Impact factor: 3.087
 - **Contribution:** Collected data (student survey), and edited the manuscript
4. Oyama, S., Bilke, C., **Park, S.-W.**, & Giambini, H. The effects of throwing arm position at stride foot contact on shoulder and elbow joint moments in baseball pitching. Under Review at American Journal of Sports Medicine
 - 2021 Impact factor: 7.010 Q1 in Orthopedics and Sports Medicine
 - **Contribution:** Data analysis (PCA), and edited the manuscript
5. ⁺Angel, R., & ***Park, S.-W.** Analyzing perturbation characteristics in an asymmetrical bimanual movement. Under Review at Scientific Reports
 - 2021 Impact factor: 4.996, Q1 in Multidisciplinary

- Contribution: Designed the study, collected and analyzed data, wrote draft, and edited the manuscript
- 6. ***Park, S.** & Valadez, R. Continued change of kinematics during prolonged practice after polyrhythmic skill acquisition. Under Review at NeuroReport
 - 2020 Impact factor: 1.703, Q3 in Neuroscience (Misc.)
 - Contribution: Designed the study, collected and analyzed data, wrote draft, and edited the manuscript

Articles in Preparation (with complete draft)

1. ***Park, S.-W.**, Oh, J.S., Ryu, J.K., Lee, J.Y., Lee, K.M., & Sternad, D. Change of variability during virtual throwing in patients with Parkinson's Disease.
2. ***Park, S.-W.**, Ebert, J., & Sternad, D. Asymmetric learning in an asymmetric bimanual task.
3. ***Park, S.-W.**, Dijkstra, T.M.H., & Sternad, D. Generalization of bimanual polyrhythmic skills.
4. *Harrigan, K., **Park, S.-W.** & Sternad, D. Individual characteristics in discrete and rhythmic timing abilities.
5. *Kim, J., **Park, S.-W.**, Sternad, D., & Large, E. Coupled oscillator model of bimanual polyrhythmic coordination.

Peer-reviewed Conference Papers

1. ***Park, S.-W.**, Hogan, N., & Sternad, D. (2014). Coordinate invariance of variability analysis: A revised covariation cost analysis. *The 40th Annual Northeast Bioengineering Conference*. Boston, MA.
 - An IEEE-sponsored event hosted annually by Universities all over the Northeastern US. Established 1974.

Presentations

Poster Presentations

1. **Park, S.-W.**, Bond, S., Cardinaux, A., Sinha, P., & Sternad, D. (2022). Postural atypicality during motor preparation in children with autism spectrum disorder. *International Society of Autism Research (INSAR)*, Austin, TX, USA, May 11-14.
 - Largest autism conference in the nation (attendee about 400)
2. Angel, R., & **Park, S.-W.** (2021). Interactions between rhythmic and discrete movements in bimanual upper-limb control. *50th Annual Conference of the Society for Neuroscience*, Virtual Meeting, November 8.

- The largest international neuroscience meeting with more than 30,000 attendees annually before the pandemic. I was the senior author.
3. Bond, S., **Park, S.-W.**, Russo, M., Cardinaux, A., Sinha, P., & Sternad, D. (2021). Predictive Impairments Compromises Motor Skills in Children with Autism Spectrum Disorder, Annual Conference of the Society for the Neural Control of Movement (NCM), Apr 20 - 22, Virtual Meeting.
 - Annual international meeting in motor neuroscience with 300-400 attendees on average
 4. Bond, S., **Park, S.-W.**, Russo, M., Cardinaux, A., Sinha, P., & Sternad, D. (2021). Computational Predictive Impairments Compromises Motor Skills in Children with ASD, Northeastern University Research, Innovation and Scholarship Expo, Apr 15, 2021, Virtual Meeting.
 - Annual university-wide meeting at Northeastern University
 5. Bond, S., **Park, S.-W.**, Russo, M., Cardinaux, A., Sinha, P., & Sternad, D. (2021). Predictive Impairments in Motor Skills in Children with Autism Spectrum Disorder, 2021 Society for Neuroscience Global Connectome, Jan 11-13, Virtual Meeting.
 - Specially designed meeting to substitute the Neuroscience Annual Meeting due to the pandemic.
 6. **Park, S.-W.**, Cardinaux, A., Guo, D., Sinha, P., & Sternad, D. (2019). Developmental aspects of predictive motor skills. *49th Annual Conference of the Society for Neuroscience*, Chicago, IL, USA, October 22.
 7. Cahill, A., Zhang, Z., **Park, S.-W.**, & Sternad, D. (2019). Extrinsic Noise Benefits Skill Acquisition and Timing Accuracy. *49th Annual Conference of the Society for Neuroscience*, Chicago, IL, USA, October 22.
 8. Kim, J.C., **Park, S.-W.**, Sternad, D., & Large, E. (2019). A Dynamical Model of Polyrhythmic Bimanual Coordination: Hebbian Plasticity and Long-Term Retention of Personal Styles. *Society for Music Perception and Cognition*, New York, NY, USA, August 5-7.
 9. **Park, S.-W.**, Cardinaux, A., Guo, D., Ben-Ami, S., Denna, L., Chan, K., Sinha, P., & Sternad, D. (2019). Predictive Motor Abilities in Children with Autism Spectrum Disorder: Evidence from Kinematics and Muscle Activity. *International Society of Autism Research (INSAR)*, Montreal, QC, Canada, May 1-4.
 10. **Park, S.-W.**, Cardinaux, A., Guo, D., Ben-Ami, S., Denna, L., Sinha, P., & Sternad, D. (2018). Impaired motor abilities during prediction in children with Autism Spectrum Disorder. *Annual Conference of the Society for the Neural Control of Movement (NCM)*, Santa Fe, NM, USA, April 30-May 4.

11. Zhang, Z., Cahill, A., Guo, D., **Park, S.-W.**, & Sternad, D. Throwing is not all about timing: Added noise can enhance tolerance to timing imprecision. *Annual Conference of the Society for the Neural Control of Movement (NCM)*, Santa Fe, NM, USA, April 30-May 4.
12. **Park, S.-W.**, Cardinaux, A., Guo, D., Ben-Ami, S., Sinha, P., & Sternad, D. (2018). Quantification of predictive motor impairments in children with Autism Spectrum Disorder. *International Society for Autism Research (INSAR)*, Rotterdam, Netherlands, May 9-12.
13. **Park, S.-W.**, & Sternad, D. (2017). Time Scales and Specificity of Acquisition, Retention and Generalization of a Novel Motor Skill over Months and Years. *Annual Conference of the Society for the Neural Control of Movement (NCM)*, Dublin, Ireland
14. Zhang, Z., Huber, M., **Park, S.-W.**, & Sternad, D. (2016). Structure of solution space in a redundant motor task determines learning. *46th Annual Conference of the Society for Neuroscience*, San Diego, CA, USA
15. **Park, S.-W.**, Tam, H., & Sternad, D. (2016). Practice-induced changes in EEG during asymmetric bimanual skill learning. *46th Annual Conference of the Society for Neuroscience*, San Diego, CA, USA
16. **Park, S.-W.**, Tam, H., & Sternad, D. (2016). Practice-induced changes in cortical activity during bimanual skill learning: An EEG study. *Biomechanics and Neural Control of Movement*, Mt. Sterling, OH, USA
17. Van Stan, J.H., Jarvis, M.T., **Park, S.-W.**, Sternad, D., Hillman, R.E., Mehta, D.D. (2015). Development of a two-dimensional virtual environment to study variability in vocal motor learning. *The 11th International Conference on Advances in Quantitative Laryngology*. London, U.K
18. Chu, V.W.T., **Park, S.-W.**, Sanger, T., & Sternad, D. (2015). Dystonic children can learn: improving sensorimotor performance by developing solutions that are tolerant to high variability. *Annual Conference of the Society for the Neural Control of Movement (NCM)*, Charleston, SC, USA
19. Ebert, J., **Park, S.-W.**, Sternad, D. (2015). Asymmetric learning in an asymmetric bimanual task. *Society for Neural Control of Movement*, Charleston, SC, USA
20. **Park, S.-W.**, Stead, C., & Sternad, D. (2015). Increase of interhemispheric coherence during acquisition of asymmetric bimanual movements. *Society for Neural Control of Movement*, Charleston, SC, USA
21. **Park, S.-W.**, Cowenhoven, J., & Sternad, D. (2014) Increase of interhemispheric coherence during acquisition of asymmetric bimanual movements. *44th Annual Conference of the Society for Neuroscience*, Washington, DC, USA

22. **Park, S.-W.**, Hogan, N., & Sternad, D. (2014) Coordinate invariance of variability analysis: A revised covariation cost analysis. *40th Annual Northeast Bioengineering Conference*, Boston, MA
23. **Park, S.-W.**, Ebert, J., & Sternad, D. (2013) Plasticity of interhemispheric interference in an asymmetric bimanual task. *43rd Annual Conference of the Society for Neuroscience*, San Diego, CA, USA
24. **Park, S.-W.**, Ebert, J., & Sternad, D. (2013) Plasticity of interhemispheric interference in an asymmetric bimanual task. *Progress in Motor Control, Montreal, QC, Canada*
25. **Park, S.-W.**, Ebert, J., & Sternad, D. (2013) Plasticity of interhemispheric interference in an asymmetric bimanual task. *Research, Innovation and Scholarship Expo*, Northeastern University, Boston, MA, USA
26. **Park, S.-W.**, Hogan, N., & Sternad, D. (2012) Coordinate invariance of variability analysis: A revised Covariation cost analysis. *42nd Annual Conference of the Society for Neuroscience*, New Orleans, LA, USA
27. Ebert, J., **Park, S.-W.**, Griffin, L., O’Neil-Pirozzi, T., & Sternad, D. (2012) Central fatigue in cognitive and motor performance. *Research, Innovation and Scholarship Expo*, Northeastern University, Boston, MA, USA
28. Farjadian, A. B., **Park, S.-W.**, & Sternad, D. (2012) Structure in variability: Searching for coordinate-insensitive methods to characterize motor control. *Research, Innovation and Scholarship Expo*, Northeastern University, Boston, MA, USA
29. **Park, S.-W.**, & Sternad, D. (2012) Learning and retention of a complex bimanual skill. *Research, Innovation and Scholarship Expo*, Northeastern University, Boston, MA, USA
30. **Park, S.-W.**, & Sternad, D. (2011) Individual differences in learning and retention of a complex bimanual skill. *41st Annual Conference of the Society for Neuroscience*, Washington DC, USA
31. Farjadian, A. B., **Park, S.-W.**, & Sternad, D. (2011) Performance improvement by optimizing error tolerance and covariation but not noise. *41st Annual Conference of the Society for Neuroscience*, Washington DC, USA
32. Farjadian, A.B., Geipel, A., **Park, S.-W.**, & Sternad, D. (2011) Improving performance by optimizing error tolerance and covariation but not noise. *Progress in Motor Control*, Cincinnati, OH, USA
33. **Park, S.-W.**, & Sternad, D. (2011) Learning an asymmetric bimanual task: decoupling of rhythmic and discrete movements. *Progress in Motor Control*, Cincinnati, OH, USA

34. **Park, S.-W.**, Dijkstra T.M.H., & Sternad D. (2010) Generalization of learning and retention of a polyrhythmic bimanual skill. *40th Annual Conference of the Society for Neuroscience*, San Diego, CA, USA
35. **Park, S.-W.**, Dijkstra T.M.H., & Sternad D. (2009) Learning of polyrhythmic synchronization in bimanual coordination and its retention after 8 years. *39th Annual Conference of the Society for Neuroscience*, Chicago, IL, USA
36. **Park, S.-W.**, Dijkstra T.M.H., & Sternad D. (2009) Dynamics of a complex bimanual task during practice and long-term retention. *Progress on Motor Control*, Marseille, France
37. **Park, S.-W.**, Dijkstra T.M.H., & Sternad D. (2009) Dynamics of a complex bimanual task during practice and long-term retention. *Dynamics Days: International Conference on Chaos and Nonlinear Dynamics*, San Diego, CA, USA
38. Keller, E.L., Hill, J.A., **Park, S.-W.**, & Lee, K.-M. (2008) Reversible inactivation of the cortical frontal eye fields: Effect on saccades generated by recall from associative memory. *38th Annual Conference of the Society for Neuroscience*, Washington DC, USA
39. **Park, S.-W.**, Lee, K.-M., Lim, Y.H., Kim, H.J., Paek, S.H., & Jeon, B.S. (2006) Correlation between phase synchronization of neural activity and the clinical outcome of deep brain stimulation in patients with Parkinson's disease. *28th Annual Meeting of the Korean Neurological Association*. Seoul, Korea
40. Heo, J.H., Seol, J.H., **Park, S.-W.**, Kang, B.S., & Lee, K.-M. (2006) Violation of listing's law in patients with central and peripheral diplopia. *9th Annual Meeting of the Korean Society for Brain and Neural Sciences*. Seoul, Korea
41. Woo, S.H., **Park, S.-W.**, & Lee, K.-M. (2006) Spatiotemporal pattern of brain activity during unilateral finger movement. *9th Annual Meeting of the Korean Society for Brain and Neural Sciences*. Seoul, Korea
42. **Park, S.-W.**, Lee, K.-M., Lim, Y.H., Kim, H.J., Woo, S.H., Paek, S.H., & Jeon, B.S. (2006) Correlation between phase synchronization of neural activity in patients with Parkinson's disease and the clinical outcome of deep brain stimulation. *Dynamics Days: International Conference on Chaos and Nonlinear Dynamics*, Bethesda, MD, USA

Oral Presentations

1. **Park, S.W.**, Cardinaux, A., Guo, D., Ben-Ami, S., Denna, L., Sinha, P., & Sternad, D. Characterizing predictive motor impairments in time and space in children with Autism Spectrum Disorder. New England Sequence and Timing (NEST), Apr. 2018, Storrs, CT, USA

2. **Park, S.-W.,** & Sternad, D. Robust retention of sensorimotor timing in a polyrhythmic task. New England Sequence and Timing (NEST), Mar. 2015, Amherst, MA, USA
3. **Park, S.-W.** Learning to never forget: Specificity of motor memory. Graduate Symposium, Biology department, Northeastern University. May, 2013, Nahant, MA, USA

Invited Talks

1. Evaluating the effect of emergent timing in a polyrhythmic skill on time perception. Brown University (virtual). June 2022.
2. Quantification of complex motor behavior and its clinical applications. Daegu Gyeongbuk Institute of Science and Technology. July 2019.
3. Understanding complex human motor control and learning in health and disease. Sungkyunkwan University. July 2019.
4. Interpretation and quantification of motor variability. Institute of Cognitive Sciences, Seoul National University. December 2017.
5. Acquisition, retention and generalization of asymmetric bimanual skills: Behavioral correlates of neuroplasticity. Sinha Lab, MIT. October 2015
6. An interdisciplinary approach to motor control and learning. Institute of Cognitive Sciences, Seoul National University. June 2015
7. What does our brain remember and forget? Specificity of motor memory. Institute of Cognitive Sciences, Seoul National University. August 2014
8. Learning to never forget: Specificity of motor memory. PRISM lecture, Northeastern University, May 2014
9. Noise, covariation and tolerance to error in learning a motor task. Department of Physical Education, Seoul National University. June 2011

Additional Training and Summer Schools

Intensive Course in Transcranial Magnetic Stimulation (TMS), Feb. 25 - Mar. 1, 2013, Harvard Medical School, Boston, MA, USA

The 8th Motor Control Summer School, June 9 - 13, 2010, Bolivar, PA, USA

Neural Control and Biomechanics of Movement, graduate course 3.183 at MIT taught by Prof. Neville Hogan. Spring 2009. Grade: A (not recorded in NU transcript)

Teaching Experience

Summer 2022 Motor Development (KAH 6213), UTSA, class size: 9
Modality Change (online-> face-to-face)
Course evaluations (n=8): Course: 5.0, Teaching: 4.8

Spring 2022 Motor Learning (KIN 4403), UTSA, class size: 115
Course evaluations (n=75): Course: 4.4, Teaching: 4.5
Foundations of Kinesiology (KIN 2303), UTSA, class size: 90
Modality Change (online -> face-to-face)
Course evaluations (n=45): Course: 4.4, Teaching: 4.5

Fall 2021 Motor Learning (KIN 4403), UTSA, class size: 172
Modality Change (online -> face-to-face)
Course evaluations (n=95): Course: 4.4, Teaching: 4.4
Psych. Pers. Motor Learning and Control, UTSA, class size: 27
First teaching (online hybrid)
Course evaluations (n=21): Course: 4.6, Teaching: 4.7

Summer 2021 Motor Development (KAH 6213), UTSA, class size: 22
Modality Change (pandemic -> online hybrid)
Course evaluations (n=10): Course: 4.9, Teaching: 4.8

Spring 2021 Foundations of Kinesiology (KIN 2303), UTSA, class size: 56
Modality Change (pandemic -> online)
Course evaluations (n=32): Course: 4.5, Teaching: 4.5
Motor Learning (KIN 4403), UTSA, class size: 150
Course evaluations (n=108): Course: 4.4, Teaching: 4.5

Fall 2020 Motor Learning (KIN 4403), UTSA, class size: 248
First teaching
Course evaluations (n=135): Course: 4.4, Teaching: 4.4

Spring 2020 Foundations of Kinesiology (KIN 2303), UTSA, class size: 71
Modality change (face-to-face-> pandemic)
No course evaluations due to COVID-19
Motor Development (KAH 6213), UTSA, class size: 15
First teaching
No course evaluations due to COVID-19

Fall 2019 Foundations of Kinesiology (KIN 2303), UTSA, class size: 98
First teaching
Course evaluations (n=65): Course: 4.0, Teaching: 3.7

August 6 th , 2016	Summer School in Computational Sensory-Motor Neuroscience, Teaching assistant of Dagmar Sternad, University of Minnesota, Minneapolis
May 2014	Proactive Recruitment in Introductory Science and Mathematics (PRISM) graduate student mentor, Northeastern University
May 2013	PRISM graduate student mentor, Northeastern University
May 2012	PRISM graduate student mentor, Northeastern University
May 2011	PRISM graduate student mentor, Northeastern University
Sep. 2010–Apr. 2011	Teaching Assistant in Biology, Northeastern University, Subject: General Biology Lab I (undergraduate level)
Sep. 2005 - Dec. 2005	Teaching Assistant in Cognitive Science Program/Department of Neurology, Seoul National University Subject: Cognitive Dysfunction (graduate level)

Mentoring

Independent Study (MS Level)

Nicole Gramm (Spring 2022)

Literature review and study design in child rehabilitation and robot-assisted therapy

Remington Angel (Summer 2020)

Computational Motor Control and Learning (Bimanual Coordination)

Christina Jimenez (Summer 2020)

Developmental Motor Disorders (Autism and Motor Control)

Independent Study (Undergraduate Level)

Denys Tavares (Spring 2022)

Collecting data from children with autism, literature search in the area of autism and motor control

Roberto Valadez (Spring 2022)

Conducting experiment on motor learning

Honors Contract

Kayle Cuellar (Fall 2021)

Motor Learning – summarizing articles on sensorimotor differences in autism spectrum disorder

Graduate Research Assistant

Javier Moreno (Fall 2019)

Graduate Research Assistant (19 hrs/wk)

Trained background knowledge for research

Remington Angel (Spring 2020 – present)

Graduate Research Assistant (19 hrs/wk)

Syiece Bowie (Spring 2020 – Summer 2020)

Graduate Research Assistant (19 hrs/wk)

Clayton Bilke (Fall 2021 – present)

Graduate Research Assistant jointly with Dr. Sakiko Oyama

Undergraduate students in Kinesiology at UTSA:

Timothy Smith (Summer 2020 –Fall 2021)

PhD student at UTSA (co-advising with COEHD faculty):

Suzanne Byrne (Spring 2020 – present)

Master's student in Biology at Northeastern University:

Nick Korsantia (Fall 2013-Summer 2016)

Undergraduate students from Northeastern University:

Leo Byun (Fall 2010-Spring 2011)

Julia Ebert (Fall 2011-Spring 2015), Recipient of Goldwater Fellowship and Marshall fellowship

Julia Cowenhoven (Spring 2014), Recipient of Undergraduate Research Grant

Courtney Stead (Fall 2014-Spring 2015), Recipient of Undergraduate Research Grant

Hannah Tam (Fall 2015-Spring 2019), Recipient of Goldwater Fellowship and Undergraduate Research Grant

Kathleen Owens (Fall 2015-Fall 2016)

Dena Guo (July 2016-Summer 2018)

Lynnsey Martin (Fall 2016 – Spring 2018)

Jeffrey Zhu (Fall 2017-Spring 2019)

Abigail Cahill (Summer 2018 – Summer 2019)

Meredith Young (Fall 2018 – Spring 2019)

Sabrina Bond (Spring 2019- Fall 2021), Recipient of Goldwater Fellowship

Luis Bechara (Spring 2019)

Undergraduate student from MIT:

Charlie Andrews (Fall 2015)

Albert Gerovitch (Spring 2018-present)

Annie Abay (Spring 2018)

Professional Services

Ad-hoc Reviewer

Journal of Motor Behavior

Journal of Neurophysiology

Scientific Reports

Attention, Perception & Psychophysics

Human Movement Science

Conference volunteer

40th Annual Northeast Bioengineering Conference. Apr. 2014, Boston, MA

9th Annual Meeting of the Korean Society for Brain and Neural Sciences. Nov. 2006, Seoul, Korea.

Conference Paper and Abstract Reviewer

The 6th International Conference on Biomedical Engineering and Biotechnology. Oct. 2017, Guangzhou, China.

The 11th International Conference on Biomedical Engineering and Biotechnology. Nov. 2022, ShenZhen, China.

International Society for Autism Research Annual Meeting. May 2023, Stockholm, Sweden.

Committee and Task Force

Department

FTT faculty mentoring plan task force (Fall 2019)

Executive committee at the Autism Research Center (Fall 2019 – Spring 2020)

Department Curriculum Committee (Spring 2020)

External Chair Search Task Force (Fall 2020)

External Chair Search Committee (Fall 2020 – Spring 2021)

Department Faculty Advisory Committee (Fall 2021 – present)

Academic Plans and Curriculum Committee (Fall 2021 – present)

College

HCaP Dean's Advisory Council (Fall 2021 – present)

Community Leadership and Outreach

Secretary, Korean Biological Science Faculty Group in San Antonio, Fall 2019 - Spring 2020

My role: Communicating with Korean Life Science faculty in San Antonio in order to organize meetings and seminars. Due to COVID-19, meetings did not take place during the period.

Volunteering weekly outreach at Living Laboratory, the Museum of Science, Boston, MA. Oct. 2017 – May 2018

My role: Designing experiments run at the museum, analyzing data from approx. 400 participants, supervising undergraduate volunteers

Volunteering Unruly Art event, Nov.18, 2016 and Nov. 29, 2017, Joseph Lee K-8 School, Boston, MA

My role: Helping children (4-13-year-old) that needs special care during art class.

Lab demonstration for Driscoll School (Brookline, MA, 2012, 2016 and 2017) and Citizen Schools (Chelsea, MA, 2016)

My role: Explaining and demonstrating EEG experiment to 7-8th grade students

Organizing Haiti Benefit Concert, Apr. 26, 2014, the Fenway Center, Boston, MA, USA

My role: Administrating a benefit concert for Haiti

Missionary trips to Haiti, Dec. 3-10, 2011 and Sep. 1-8, 2012, Cap-Haitien, Haiti

My role: Helping orphans and elderly people who need special assistance, outreaching to families who need food

President, Korean Graduate Student Association, Northeastern University, May 2010 – Apr. 2011

My role: Organizing meetings, maintaining the student organization

Membership

Society for Neuroscience

Society for the Neural Control of Movement

American Physiological Society (Regular Member 2017)

International Society for Autism Research