CURRICULUM VITAE
JINSEOK OH
6-NOV-2024

PERSONAL INFORMATION:

Work

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Home

321 North Kenmore Avenue
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Citizenship: Republic of Korea

EDUCATION AND PROFESSIONAL APPOINTMENTS

EDUCATION:

2017-2022	*Ph.D. in Kinesiology, University of Minnesota, Minneapolis*
2015-2017	*M.A. in Cognitive Science, Seoul National University, Seoul*
2008-2013	*B.A. in Cognitive Systems, University of British Columbia, Vancouver*

POST-GRADUATE TRAINING:

2022-Present	*Postdoctoral Fellow (Mentor: Beth. A. Smith, PhD), Division of Developmental-Behavioral Pediatrics, Children's Hospital Los Angeles, Los Angeles*

HONORS, AWARDS:

2017	*Provost Fund*	*University of Minnesota, Minneapolis*
2017	*College of Education and Human Development Graduate Student Fellowship*	*University of Minnesota, Minneapolis*
2017	*National Research Fellowship*	*Korea Student Aid Foundation, Seoul*
2012	*Int'l Student Scholarship*	*University of British Columbia, Vancouver*
2008	*Outstanding Int'l Student Award*	*University of British Columbia, Vancouver*
2008	*President's Entrance Award*	*University of British Columbia, Vancouver*

TEACHING

DIDACTIC TEACHING:

University of Minnesota

2020-2022	*Introduction to Motor Learning and Control*	*3 cr*	*Teaching Assistant*
2020-2022	*Introduction to Biomechanics*	*4 cr*	*Teaching Assistant*

Seoul National University

2016	*Seminar in Cognitive Science*	*3 cr*	*Teaching Assistant*

SERVICE

DEPARTMENT SERVICE:

2019	*Student Rep, Graduate Education Committee*	*School of Kinesiology, University of Minnesota*
2019 - 2020	*Vice president, Graduate Student Council*	*School of Kinesiology, University of Minnesota*
2024	*Interviewer for the Programs Manager position*	*Office of Research Postdoc Affairs, Children's Hospital Los Angeles*

PROFESSIONAL SOCIETY MEMBERSHIPS:

2021-2023	*American Society of Neurorehabilitation*
2024-current	*International Society for the Measurement of Physical Behaviour*

COMMUNITY SERVICE:

2023-2024	*Teaching Assistant*	*Reproducible Rehabilitation (ReproRehab) research education program*	*Led a 6-week bootcamp for beginer level MATLAB programmers*

RESEARCH AND SCHOLARSHIP

MANUSCRIPT REVIEW:

2024	*JMIR mHealth and uHealth (assisted with review)*
2024	*Digital Health*
2024	*Physical and Occupational Therapy in Pediatrics (assisted with review)*
2024	*Nature Scientific Reports*
2023	*Journal of Motor Behavior (assisted with review)*
2023	*Pediatric Physical Therapy (assisted with review)*
2023	*Gait and Posture (assisted with review)*
2022	*Physical and Occupational Therapy in Pediatrics (assisted with review)*

MAJOR AREAS OF RESEARCH INTEREST

Research Areas

1. Quantification of spontaneous movements of infants and associating with clinical measures
2. Understanding the role of sensory perception involved in spontaneous leg movements
3. Use of non-linear time-series measure to understand the variability/complexity of infant movements

GRANT SUPPORT - PAST:

Grant-in-Aid #468390 (PI: Jürgen Konczak, PhD)   *Feb, 2021*

Office of the Vice President for Research, Univ. of Minnesota   *Percent effort: 50%*

Title: Objective quantification of hand and knee proprioception in typically developing children
Hand prorioceptive acuity of typically developing chidlren from 8-17 yrs old was measured and analayzed
Role: co-investigator
Total Direct Costs: $5,468

AWARD/FELLOWSHIP APPLIED (UNSUPPORTED) - PAST:

Thrasher Early Career Award   *Sep, 2023*

Thrasher Research Fund

Title: Quantifying movement patterns of infants with Spinal Muscular Atrophy using a wearable sensor suit
Collecting and analyzing movement data of infants with SMA using a wearable sensor suit and an associated analysis algorithm
Role: Principal Investigator
Total Costs requested: $25,927

C-PROGRESS Rapid Funding   *Feb 2024*

National Pediatric Rehabilitation Research Center

Title: Quantifying movement patterns of infants with Spinal Muscular Atrophy using a wearable sensor suit
Collecting and analyzing movement data of infants with SMA using a wearable sensor suit and an associated analysis algorithm
Role: Principal Investigator
Total Costs requested: $50,000

THESIS:

2022 Ph.D.   *Univ. of Minnesota*   *Assessment of human finger position sense and the effect of vibro-tactile stimulation on proprioceptive acuity*

PUBLICATIONS:

REFEREED JOURNAL ARTICLES:

Oh, J., Loeb, G., & Smith, B., The Utility of Calibrating Wearable Sensors before Quantifying Infant Leg Movements. *Sensors*, 24(17): 5736, 2024.
Collected data, performed formal analysis, prepared and reviewed the manuscript

Oh, J., Ordoñez, E. L. T., Velasquez, E., Mejía, M., del Pilar Grazioso, M., Rohloff, P., & Smith, B. A., Associating neuromotor outcomes at 12 months with wearable sensor measures collected during infancy in rural Guatemala. *Gait & Posture*, 113:477-489, 2024. PMID:39126960
Performed formal analysis and prepared the manuscript.

Oh, J., Ordoñez, E., Velasquez, E., Mejía, M., Grazioso, M., Rohloff, P., & Smith, B., Early full-day leg movement kinematics and swaddling patterns in infants in rural Guatemala: a pilot study. *PLoS One*, *19*(2), e0298652, 2024. PMID:38422106.
Performed formal analysis and prepared the manuscript.

Oh, J., Mahnan, A., Xu, J., Block, HJ., & Konczak, J., Typical development of finger position sense from late childhood to adolescence. *Journal of Motor Behavior.* 55(1):102-110, 2023. PMID:36257920.
Designed the experiment, collected data, performed statistical analysis, and prepared the manuscript.

Park, S-W., **Oh, J.**, Ryu, J-K., Shin, M-J., Lee, J-Y., Lee, K-M., & Sternad, D., Changes of Upper-Limb Kinematics During Practice of a Redundant Motor Task in Patients with Parkinson's Disease. *Scientific Reports*
Collected data, performed statistical analysis, prepared and reviewed the manuscript.

Pini, N., Fifer, W. P., **Oh, J.**, Nebeker, C., Croff, J. M., Smith, B. A., & the Novel Technology/Wearable Sensors Working Group. (2024). Remote Data Collection of Infant Activity and Sleep Patterns via Wearable Sensors in the HEALthy Brain and Child Development Study (HBCD). *Developmental Cognitive Neuroscience, 69*, 101446.
Prepared the manuscript

Konczak, J., Bhaskaran, D., Elangovan, N., **Oh, J.,** Goding Jr, G. S., & Watson, P. J. Effects of an 11-week vibro-tactile stimulation treatment on voice symptoms in laryngeal dystonia. *Frontiers in Neurology*, *15*, 1403050, 2024.
Collected data, performed statistical analysis, prepared and reviewed the manuscript.

Xu, J., Costanzo, M., Avanzino, L., …, **Oh, J.,** Conte, A., & Konczak, J., Vibro-tactile stimulation of the neck reduces pain in people with cervical dystonia: a proof-of-concept study. *Neurological Science: official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology*, 2024. PMID:38730131
Collected data and reviewed the manuscript.

Misono, S., Xu, J., **Oh, J.,** Sombrio, A., Stockness, A., Mahnan, A., & Konczak, J., Atypical activation of laryngeal somatosensory-motor cortex during vocalization in people with unexplained chronic cough. *JAMA Otolaryngology-Head & Neck Surgery*, *149*(9), 820-827, 2023. PMID:37471077.
Prepared an experimental device, collected / preprocessed data, and prepared the manuscript.

Boyer, E., Huang, Q., Ngwesse, S., Nelson, J., **Oh, J.,** & Konczak, J., Ankle proprioception in children with cerebral palsy. *Journal of Pediatric Rehabilitation Medicine*, 2023. PMID: 38007680.
Performed statistical analysis and prepared the manuscript.

Van de Winckel, A., Zhang, L., Hendrickson, T., …, **Oh, J.,** …, & Bronfort, G., Identifying body awareness-related brain network changes after Spring Forest Qigong™ practice or P. Volve low-intensity exercise in adults with chronic low back pain: a feasibility Phase I Randomized Clinical Trial. medRxiv, 2023.
Collected / preprocessed data and reviewed the manuscript.

Van de Winckel, A, Hendrickson, T., Zhang, L., …, **Oh, J.,** …, & Bronfort, G., Identifying pain modulating brain mechanisms after qigong practice for pain reduction in adults with chronic low back pain: A proof of concept study. Archives of Physical Medicine and Rehabilitation, 2022.
Collected / preprocessed data and reviewed the manuscript.

REFEREED JOURNAL ARTICLES IN PRESS:

JOURNAL ARTICLES UNDER REVIEW:

ABSTRACTS AND PRESENTATIONS:

Oh, J., & Smith, B., Describing Infant Leg Movement Characteristics using Wearable Sensors. Poster presented at the Annual Healthy Brain and Child Development Meeting 2024, September 2024, San Diego, CA.

Siampou, M., Nocera, L., **Oh, J.**, Smith, B., & Shahabi, C., An Algorithmic Approach for Detecting Neuromotor Developmental Disabilities in infants from Wearable Sensor Data. Poster presented at

the 2024 46th Anuual International Conference of the IEEE Engineering in Medicine & Biology Society, July 2024, Orlando, FL.

Remec, N., Perry, E., **Oh, J.**, Wisnowski, J., Rajagopalan, V., & Smith, B., The use of MRI for fetal movement analysis: An exploratory study. Poster presented at The Saban Research Institute Science Day, June 2024, Los Angeles, CA.

Oh, J., Rohloff, P., & Smith, B., Using a Nonlinear Time-series Wearable Sensor Data Can Predict Infant's Neuromotor Outcomes at 12 Months: A Pilot Study with Infants in Rural Guatemala. Poster presented at the International Conference of Ambulatory Monitoring of Physical Activity and Movement 2024, June 2024, Rennes, France.

Oh, J., Rohloff, P., & Smith, B., Full-day leg movement kinematics in infants at risk of poor neurodevelopmental outcomes in rural Guatemala. Poster presented at the American Society of Neural Rehabilitation 2023 Annual Meeting, March 2023, Charleston, SC.

McIntyre, M., **Oh, J.,** Wilson, A., Duong, T., Moldt, S., Wong, K., Loftus, M., Manberg, S., Butterfield, RJ., & Smith, B., Daily Quantity and Kinematic Characteristics of Leg Movement in Three Infants with SMA (2 & 4 copies SMN2): Case Studies. Poster presentation at the Cure SMA Annual Conference, July 2023, Orlando, FL.

Oh, J., Mahnan, A., Xu, J., Block, H., Konczak, J. A simple and objective assessment system for the finger position sense acuity. Poster presented at the National Science Foundation Disability and Rehabilitation Engineering (NSF DARE) conference, March 2023, Los Angeles, CA.

Wu, Y. H., Nelson, P., Oeding, K., …, **Oh, J.,** …, & Legge, G., Impact of the COVID-19 Pandemic on Social Isolation in Older Adults with Sensory Loss. *Investigative Ophthalmology & Visual Science*, 62(8), 3613-3613, 2021.

Oh, J., Mahnan, A., Xu, J., Holst-Wolf, J., & Konczak, J. An objective hand proprioception assessment system for pediatric and adult clinical populations. Poster presented at the American Society of Neural Rehabilitation 2021 Virtual Annual Meeting, April 2021.

Bhaskaran, D., Elangovan, N., Mahnan, A., **Oh, J.,** Watson, P., & Konczak, J., Initial data on long-term effects of laryngeal vibro-tactile stimulation in people with spasmodic dysphonia. Poster presented at the Rehabilitation Research 2020: Envisioning a Functional Future, October 2020.

Oh, J., Mahnan, A., Xu, J., Holst-Wolf, J., Block, H., & Konczak, J., A system for the objective assessment of hand proprioceptive function in pediatric and adult populations. *Frontiers in Biomedical Devices*. 83549: V001T10A016, 2020. PMID:36257920.
Developed the assessment software, validated it, and prepared the manuscript.

Oh, J., Curry, C., & Mahnan, A., Investigation of the effect of virtual reality on postural stability in healthy adults. Abstract submitted in *2020 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, March 2020.