



Matthew N. Petrucci, PhD is a Postdoctoral Research Fellow in the Department of Neurology at the University of Minnesota. He obtained a MS in mechanical engineering and PhD in neuroscience from the University of Illinois at Urbana-Champaign, and a BS/BA in mechanical engineering from the University of San Diego. His dissertation research primarily focused on improving gait initiation in people with Parkinson's disease (PD) and freezing of gait (FOG) using a powered ankle foot orthosis. During his graduate career, he also worked on projects that examined the application of a powered ankle foot orthosis for gait assistance in persons with multiple sclerosis and perception vs. action coupling in firefighters wearing protective gear. He was awarded a MnDRIVE Neuromodulation Postdoctoral Fellowship in 2016 to develop quantitative measures of the mechanical and neurophysiological components of rigidity in PD. In 2017, he was awarded the Parkinson's Study Group Mentored Clinical Research Award to evaluate an automated closed-looped algorithm to rapidly optimize deep brain

stimulation settings for people with PD. Dr. Petrucci aspires to obtain a tenure-track faculty position focused on translation research in the field of movement disorders, with the goal of developing novel neuromodulation strategies to reduce motor impairments.

Petrucci, M.N., Amundsen Huffmaster, S.L., Lu, C., Tuite, P.J., Howell, M.J., MacKinnon, C.D. Increased and symmetric expression of rigidity in early Parkinson's disease with abnormal REM sleep without atonia. 21st International Congress of Parkinson's Disease and Movement Disorders, Vancouver, BC, June 4-8, 2017.

Petrucci, M.N., MacKinnon, C.D., Hsiao-Wecksler, E.T. Effectiveness of self-triggered versus externally-triggered cueing for improving gait initiation in persons with Parkinson's disease and freezing of gait. 45th Annual Society for Neuroscience, Chicago, IL, October 17-21, 2015.

Petrucci, M.N., MacKinnon, C.D., Hsiao-Wecksler, E.T. A powered orthosis improves the magnitude and consistency of gait initiation in Parkinson's disease with freezing of gait. 19th International Congress of Parkinson's Disease and Movement Disorders, San Diego, CA, June 14-18, 2015.

Petrucci, M.N., MacKinnon, C.D., Hsiao-Wecksler, E.T. Modulation of Anticipatory Postural Adjustments Using a Portable Powered Ankle Foot Orthosis. IEEE 13th International Conference on Rehabilitation Robotics, Seattle, WA, June 24-26 2013. **Best Student Paper Finalist**
<http://dx.doi.org/10.1109/ICORR.2013.6650450>

Petrucci, M.N., Rosengren, K.S., Horn, G.P., Hsiao-Wecksler, E.T. Inaccuracy of Affordance Judgments for Firefighters Wearing Personal Protective Equipment. *Ecological Psychology*, Published online: 2 May, 2016. <http://dx.doi.org/10.1080/10407413.2016.1163987>

www.parkinson-study-group.org

July 2017