

SEMINAR SERIES

Supported by The Department of Biomechanics and
The Center for Research in Human Movement Variability (MOVCENTR)



INTERPRETATION OF THE SURFACE ELECTROMYOGRAPHY IN DYNAMIC SKILLS

Featuring Dr. Luis Silva
University of Nebraska at Omaha

February 15, 2019

12:00 - 1:15 pm | H&K112

Parking Available in Lot T

ABOUT DR. SILVA

Luís Silva received his Ph.D. in Human Kinetics – Motor Behavior from the Faculdade de Motricidade Humana, Universidade de Lisboa (Human Kinetics Faculty – Lisbon University). He is graduated in Sport Science – Physical Condition, graduated in Management, M.Sc. in Statistics, Mathematics and Computation, and M.Sc. in Artistic Performance. Currently, he is Research Associate at the Department of Biomechanics of the University of Nebraska at Omaha. His research topics are motor behavior analysis, nonlinear methods, and rehabilitation of coordinative abilities in older adults using non-invasive techniques such as external cueing.

LEARNING OBJECTIVES

The purpose of this presentation is to describe the usage of surface electromyography (EMG) in the study of muscle participation when performing dynamic tasks. At the conclusion of this presentation, participants will be able to discuss applications of EMG, its limitations and how should results be interpreted. The discrimination of different handicap and low back pain levels will be one of the main focus of this presentation showing how muscle activation can be an indicator of different motor constraints. Participants will be able to identify how these motor constraints correspond to different neural strategies and to related adjustments of nervous central system using support vector machines technique, a machine learning approach.

The presenter Luis Silva, PhD has no financial conflict of interest to disclose. Members of the planning committee, Nick Stergiou, Ph.D., Jeffrey Kaipust, M.S., Angela Collins, M.A., Laura Rotert, B.S., and Jackie Farley, CPP have no financial conflict of interest to disclose.

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