

UNIVERSITY OF SOUTH FLORIDA

Defense of a Master's Thesis

A Smartphone-based System for Clinical Gait Assessment

by

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For the MSCS degree in Computer Science & Engineering

Patients with lower limbs problems are an increasing population in the US and many of them require surgery and its subsequent post-op Physical Therapy (PT). To assess the patients and track their progress, patients are usually required to perform very specific tests administered by a physical therapist. This thesis presents a system for Clinical Gait Assessment using exclusively the sensors embedded in today's smartphones. The system is therefore objective, cheap, mobile, and self-care. It includes a new step detection algorithm and algorithms to detect the deviation from a straight path, and autocorrelation and DTW metrics, which provide additional information to detect different impediments of the user gait.

Wednesday, April 6, 2016

11:00 AM

ENB 313

THE PUBLIC IS INVITED

Examining Committee

Miguel A. Labrador, Ph.D., Major Professor

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