

Goal: Develop a software and hardware platform for researchers to perform human subject studies involving administering rapid acceleration/deceleration events while on a treadmill. This platform will include the incorporation of data from several sources including; but not limited to, motion capture, force plate, EMG, tachometer, and Stimulator Box. This platform will also include the ability to administer small amounts of current to human subjects in order to elicit a reflex.

Hardware: 1.) Bertec Instrumented Treadmill model ITR-11
2.) Infrared Tachometer*
3.) Qualysis Oqus E500 Motion Capture Cameras
4.) Intel I7 PC
5.) National Instruments Data Acquisition Board
6.) Machine Computing Data Acquisition Board
7.) Bertec Force Plates

Software: 1.) Qualysis Track Manager Motion Capture Software
2.) Bertec Treadmill Control Software.
3.) Treadmill Rapid Accel/Decel/Stim Control Software (TRADSCS)*

* See Below for Description

Project Description: