Project Title: Statistical Modeling for Evaluating Human Motion

Project Description: The Stirling Research Group (http://stirling.mit.edu/research) has an open post-doc position in the domain of statistical modeling for a collaborative project between MIT and the University of Michigan, sponsored by the U.S. Army. Soldier performance is inherently challenging to understand, to monitor, and ultimately, to quantify. These challenges originate from the varied and complex tasks that the soldier performs, the underlying variability in human task performance, the environments in which they operate, and a limited knowledge of the measures that truly characterize task performance success. The system architecture for wearable motion-sensing technology can be augmented to provide robust information that is interpretable by a nonexpert in sensor technology and physiological systems. The overall objectives of this work include exploiting wearable sensor technology to develop performance metrics that are interpretable by a nonexpert for decision-making scenarios. The project team has collected data from people going through an obstacle course and has developed metrics for these obstacles. The objective of this post-doc is to develop statistical models with these data to aid in informing decision makers.

Prerequisites: Experience with statistical modeling (e.g., multifactor regressions, classification, clustering, and/or Bayesian methods).

Experience: This position requires a PhD in Statistics, Computer Science, or related discipline.

Contact: Prof. Leia Stirling (leia@mit.edu)