Abstract Elena Gutierrez Farewik, KTH Stockholm

Title: Smartphone-based motion tracking for remote rehabilitation and therapy.

Abstract:
Telerehabilitation and remote therapy became both desirable and necessary since the pandemic. Digital technology that is theoretically useful is vast but clinical implementation has transformed much more slowly. The ethical complexities of assessments made outside of a clinical setting have also not been thoroughly solved. In this project, we focus on measuring human movement anywhere. We are developing a novel app that leverages depth sensing cameras that are available on nearly all modern smart devices, pose estimation, and a machine learning algorithm trained from laboratory-based measurements of human movement. The app allows for interaction between patients and clinicians, as well as quantitative analyses of movement quality longitudinally, and is easy enough to be used in one's own home.