Gait with Upper Extremity Analysis

- Incorporate instrumented walkers and canes from AMTI into the analysis of gait.
- Output all kinematic data including upper extremity joint moments and forces using simple drop-down menus.
- Register and align transducer force and moments with the hand’s local coordinate system.
- Trigger data collection with forceplate impact or foot switches for hands-free collection.
- Normalize data by body weight, height, percentage of gait cycle, and stride length.
- Automatically ensemble average output data. Display with standard deviations and/or scatter plots.
- Create user parameterized databases for comparative analysis of subject data.

AMTI’s hand transducer, shown below, is easily incorporated into walkers and canes. When the transducer’s coordinate system is registered or aligned with the local coordinate system of the hand, The MotionMonitor can compute the joint forces generated at the wrist, elbow and shoulder. The MotionMonitor includes pre-defined methods for completing the registration. Display of animated forces and graphical displays of data graphs are selected from intuitive drop-down menus.

Real time data acquisition, analysis, and 3D visualization. Turnkey hardware solutions. Upgradeable as your needs change. Research Design & System Engineering consultation.