The table below compares and contrasts different inverse methods. Not all methods are available from within the OpenSim graphical user interface (GUI) (see the "Available Interfaces" column below). Adapted from https://simtk-confluence.stanford.edu:8443/display/OpenSim/Overview+of+OpenSim+Workflows#OverviewofOpenSimWorkflows-_Toc174680178

METHOD	GOAL	KEY CONSIDERATIONS	AVAILABLE INTERFACES	RESOURCES
Inverse dynamics	Calculate joint torques from a measured motion	Straightforward; minimal assumptions	GUI CMD* C++ **	Overview User Guide: Inverse Dynamics Hands-on Example (Beginner): Scaling, Inverse Kinematics, and Inverse Dynamics
Static optimization	Estimate muscle force/activations from a measured motion	Fast estimation; assumes rigid tendons; minimizes activation squared at each time step	GUI CMD* Scripting **	Overview User Guide: Static Optimization Hands-on Example (Intermediate): Working with Static Optimization Hands-on Example (Intermediate): Estimating Leg Muscle Forces in Stance and Swing
Computed muscle control (CMC)	Estimate muscle excitations from a measured motion	Excitation-activation dynamics; accounts for tendon stretch; minimizes activation squared at each time step	GUI CMD*	Overview User Guide: Computed Muscle Control Hands-on Example (Intermediate): Computed Muscle Control Hands-on Example (Intermediate): Estimating Leg Muscle Forces in Stance and Swing CMC Theory and Publications
EMG-informed methods	Estimate musculotendon parameters given a measured motion and muscle activity	Normalizing muscle activity is necessary	CMD* Scripting **	Overview Calibrated EMG-Informed Neuromusculoskeletal Modeling (CEINMS) Toolbox

*"Command Line" refers to the interactive, text-based interface within OpenSim.
**"Scripting" refers to calling commands from other languages, specifically MATLAB and Python.