Fig. 1. Paretic hip and knee angle kinematics (unit: degree). CPT-G, conventional physical therapy and gait training; ICT-C, ankle-knee-hip interlimb coordinated humanoid robot combined with conventional physical therapy; * denotes within-group significance at $P < 0.05$; ‡ denotes significance at $P < 0.05$. Dark gray, pre-training time point; light gray, post-training time point.
Fig. 2. Mean pre- and post-test difference in a paretic hip, knee, and ankle stiffness (unit: Nm). CPT-G, conventional physical therapy and gait training; ICT-C, ankle-knee-hip interlimb coordinated humanoid robot combined with conventional physical therapy. Between-group stiffness was significantly reduced.
Fig. 3. The control scheme of the position-based impedance control for gait rehabilitation. ROB, reaction torque observer.
Fig. 4. Lower-extremity kinematic joint angle calculation in ICT system.
ICT, innovative ankle-knee-hip interlimb coordinated humanoid robot.