

Supplementary Figures S5–S9: Bland-Altman plots of joint angle range of motion and joint angle variability outcomes

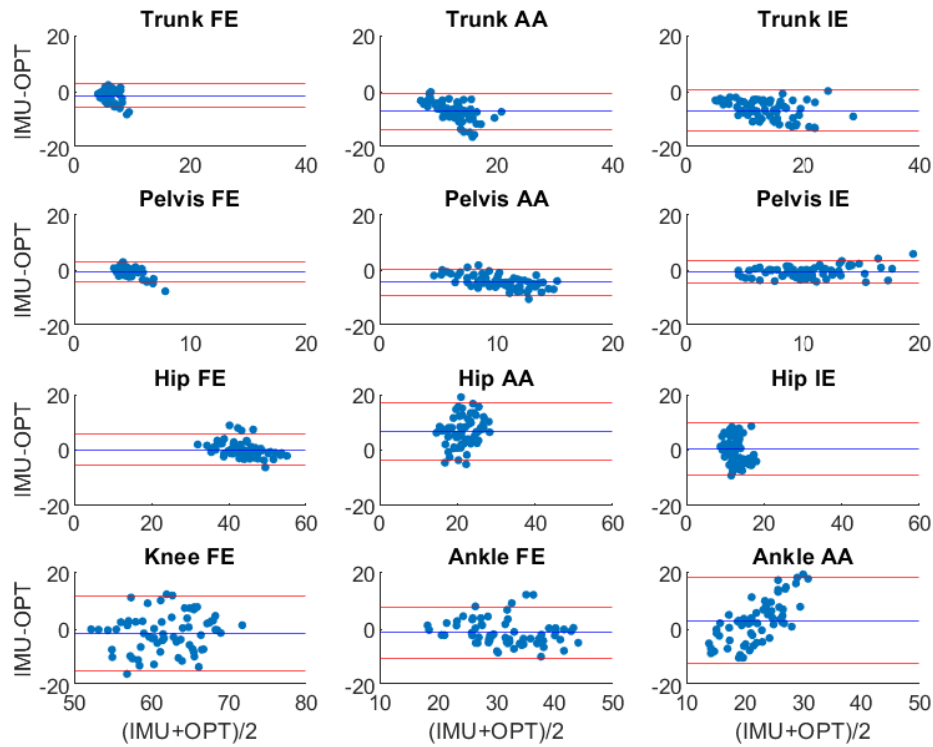


Figure S5. Bland-Altman plots of range of motion (ROM) of trunk, pelvis, and lower-limb joint angles for the optoelectronic-driven (OPT) and IMU-driven biomechanical models of constant-speed treadmill gait. Mean bias (blue line) and 95% limits of agreement (red lines) are shown. Values are in degrees ($^{\circ}$). Angles include flexion/extension (FE), abduction/adduction (AA), and internal/external rotation (IE).

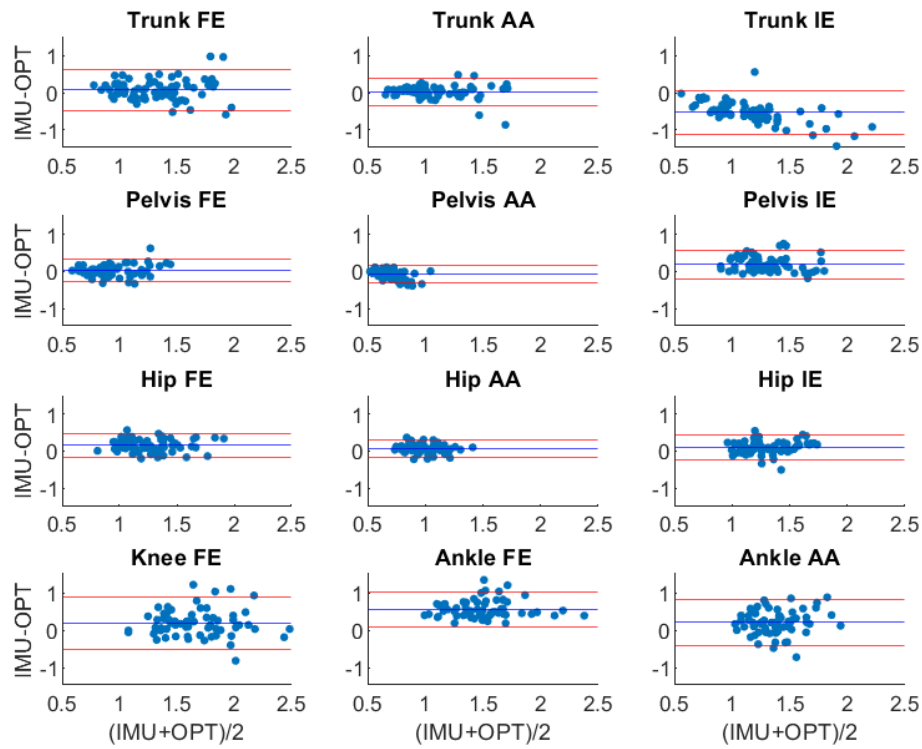


Figure S6. Bland-Altman plots of mean standard deviation (meanSD) of trunk, pelvis, and lower-limb joint angles for the optoelectronic-driven (OPT) and IMU-driven biomechanical models of constant-speed treadmill gait. Mean bias (blue line) and 95% limits of agreement (red lines) are shown. Values are in degrees ($^{\circ}$). Angles include flexion/extension (FE), abduction/adduction (AA), and internal/external rotation (IE).

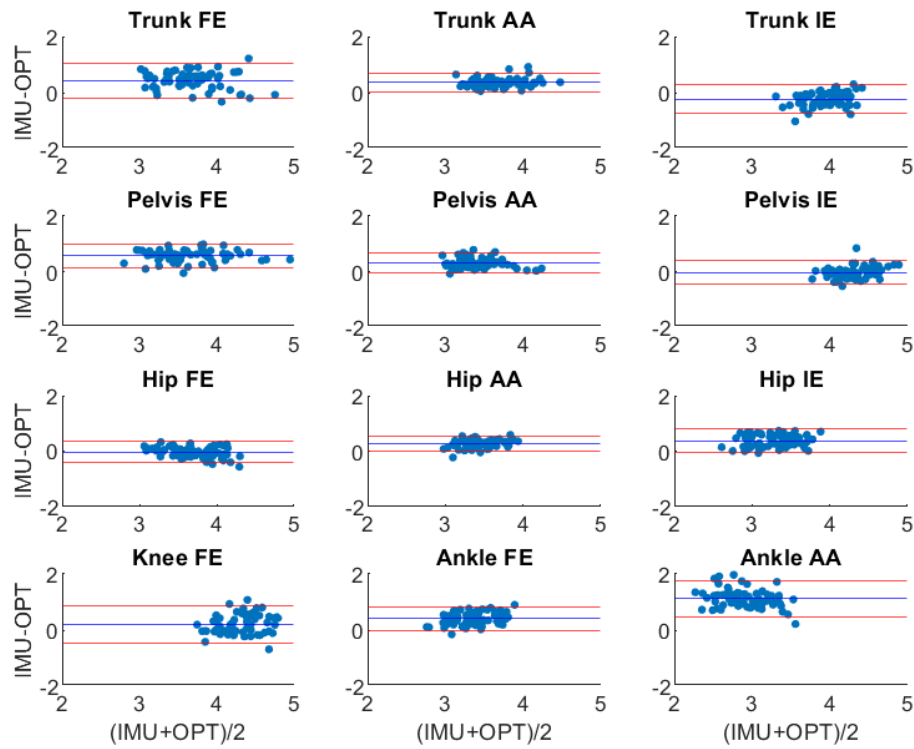


Figure S7. Bland-Altman plots of local divergence exponent (λ_{\max}) of trunk, pelvis, and lower-limb joint angles for the optoelectronic-driven (OPT) and IMU-driven biomechanical models of constant-speed treadmill gait. Mean bias (blue line) and 95% limits of agreement (red lines) are shown. Values are in arbitrary units. Angles include flexion/extension (FE), abduction/adduction (AA), and internal/external rotation (IE).

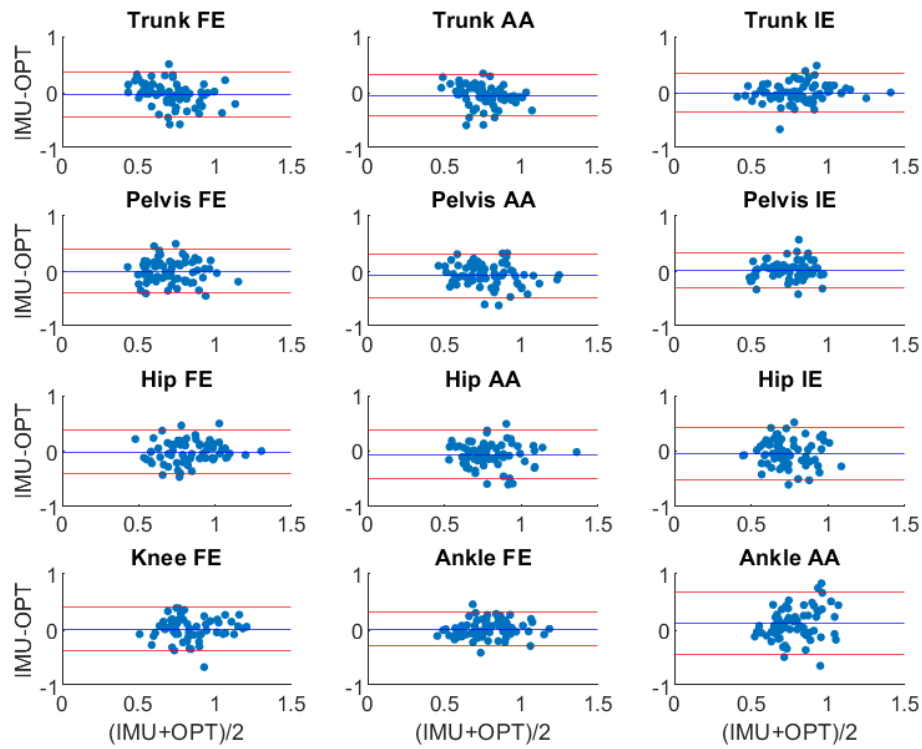


Figure S8. Bland-Altman plots of detrended fluctuation analysis scaling exponent (DFA α) of range of motion of trunk, pelvis, and lower-limb joint angles for the optoelectronic-driven (OPT) and IMU-driven biomechanical models of constant-speed treadmill gait. Mean bias (blue line) and 95% limits of agreement (red lines) are shown. Values are in arbitrary units. Angles include flexion/extension (FE), abduction/adduction (AA), and internal/external rotation (IE).

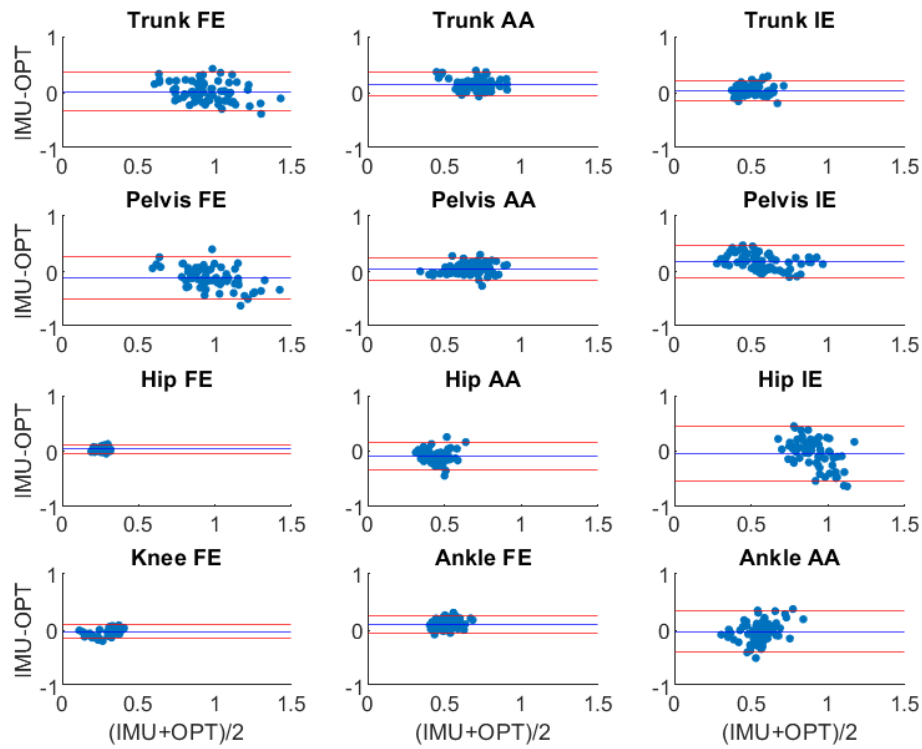


Figure S9. Bland-Altman plots of sample entropy (SaEn) of trunk, pelvis, and lower-limb joint angles for the optoelectronic-driven (OPT) and IMU-driven biomechanical models of constant-speed treadmill gait. Mean bias (blue line) and 95% limits of agreement (red lines) are shown. Values are in arbitrary units. Angles include flexion/extension (FE), abduction/adduction (AA), and internal/external rotation (IE).