

**Supplemental Table 1: Mean IMU and Motion Capture Data**

		Participant 1	Participant 2	Participant 3	Participant 4	Participant 5					
		IMU	MoCap	IMU	MoCap	IMU	MoCap	IMU	MoCap	IMU	MoCap
	Double Limb Support (s)	0.26 ± 0.01	0.23 ± 0.02	0.27 ± 0.05	0.26 ± 0.01	0.26 ± 0.01	0.24 ± 0.01	0.28 ± 0.01	0.26 ± 0.01	0.29 ± 0.01	0.28 ± 0.01
Intact Limb	Single Limb Support (s)	0.85 ± 0.03	0.82 ± 0.01	0.71 ± 0.09	0.70 ± 0.08	0.70 ± 0.08	0.72 ± 0.09	0.74 ± 0.01	0.72 ± 0.01	0.71 ± 0.01	0.70 ± 0.35
	Peak Hip Flex (°)	30.67 ± 3.26	25.85 ± 1.57	29.27 ± 1.69	28.26 ± 1.45	18.41 ± 2.12	18.36 ± 1.01	13.67 ± 1.06	15.80 ± 1.06	23.94 ± 1.10	23.31 ± 0.51
	Peak Hip Ext (°)	26.6 ± 3.35	22.85 ± 1.36	22.29 ± 0.19	27.42 ± 0.928	19.48 ± 1.20	22.45 ± 0.91	20.27 ± 1.16	18.47 ± 2.69	26.62 ± 1.49	27.33 ± 1.51
	Hip ROM (°)	57.32 ± 6.60	52.70 ± 2.82	45.56 ± 1.77	55.68 ± 0.95	37.93 ± 2.84	40.82 ± 1.83	33.94 ± 1.85	34.27 ± 3.49	49.95 ± 2.58	50.64 ± 1.82
	Peak Knee Flex (°)	14.53 ± 6.89	32.09 ± 2.05	51.43 ± 0.25	45.46 ± 3.68	33.29 ± 6.15	39.20 ± 0.61	36.88 ± 1.08	38.04 ± 0.51	39.27 ± 1.16	39.59 ± 0.77
	Peak Knee Ext (°)	8.70 ± 2.91	13.73 ± 2.73	25.89 ± 1.40	30.48 ± 0.76	17.31 ± 2.11	20.34 ± 1.12	20.15 ± 0.43	19.65 ± 1.05	23.08 ± 2.05	21.79 ± 1.68
	Knee ROM (°)	23.21 ± 9.69	45.82 ± 2.08	76.33 ± 1.29	57.96 ± 2.97	50.61 ± 8.11	59.55 ± 0.61	57.04 ± 1.34	57.69 ± 1.46	62.35 ± 2.24	61.39 ± 1.44
	Peak Ankle DF	19.78 ± 1.61	13.16 ± 7.46	23.36 ± 4.37	12.97 ± 0.17	10.07 ± 1.97	12.31 ± 0.70	14.79 ± 1.45	15.01 ± 1.45	13.34 ± 0.75	10.78 ± 0.99

	(°)							1.1 6			
	Peak Ankle PF (°)	18.20 ± 1.91	12.10 ± 5.45	18.32 ± 1.39	28.35 ± 1.84	19.40 ± 2.19	14.47 ± 1.81	28.17 ± 6.33	23.91 ± 5.29	32.68 ± 1.34	25.08 ± 1.25
	Ankle ROM (°)	37.98 ± 3.34	25.26 ± 12.81	41.68 ± 5.73	41.33 ± 1.77	29.47 ± 1.46	26.78 ± 2.11	42.97 ± 7.19	40.92 ± 6.75	46.02 ± 0.80	35.86 ± 0.44
Prosthetic Limb	Single Limb Support (s)	0.52 ± 0.06	0.56 ± 0.06	0.51 ± 0.33	0.52 ± 0.41	0.58 ± 0.05	0.61 ± 0.03	0.74 ± 0.02	0.76 ± 0.01	0.75 ± 0.02	0.78 ± 0.09
	Peak Hip Flex (°)	27.82 ± 2.48	21.24 ± 6.50	19.74 ± 1.61	23.64 ± 0.09	17.43 ± 1.43	17.19 ± 0.86	18.71 ± 0.41	14.40 ± 0.96	26.31 ± 0.89	21.68 ± 0.48
	Peak Hip Ext (°)	21.32 ± 1.19	22.62 ± 0.52	19.82 ± 1.15	28.34 ± 1.47	17.07 ± 0.81	20.51 ± 0.72	24.06 ± 0.72	19.77 ± 3.31	24.03 ± 0.65	26.50 ± 1.45
	Hip ROM (°)	49.14 ± 3.64	43.86 ± 6.45	39.57 ± 2.49	51.98 ± 1.56	34.50 ± 1.99	37.70 ± 1.47	42.77 ± 0.91	34.18 ± 4.25	50.33 ± 1.22	48.17 ± 1.92
	Peak Knee Flex (°)	18.81 ± 4.00	23.75 ± 2.00	41.78 ± 1.36	48.99 ± 1.56	28.93 ± 1.61	37.19 ± 0.99	28.00 ± 1.32	29.46 ± 9.02	47.17 ± 1.86	50.85 ± 0.33
	Peak Knee Ext (°)	11.71 ± 1.73	13.39 ± 1.37	20.82 ± 3.55	23.63 ± 2.11	13.35 ± 2.79	14.19 ± 1.22	16.52 ± 0.49	17.35 ± 6.89	60.56 ± 3.69	19.70 ± 0.99
	Knee ROM (°)	30.53 ± 5.25	37.13 ± 3.23	62.61 ± 4.12	72.62 ± 3.67	42.29 ± 3.94	51.39 ± 2.18	44.53 ± 0.84	46.81 ± 15.82	107.73 ± 2.21	70.56 ± 0.84
	Peak Ankle DF	9.18 ± 1.17	9.63 ± 0.57	6.85 ± 1.31	5.11 ± 0.35	9.03 ± 0.10	11.59 ± 0.16	12.93 ± 0.16	11.48 ± 0.36	10.31 ± 1.31	9.79 ± 0.20

	(°)							1.5 8			
	Peak Ankle PF (°)	9.74 ± 0.81	12.20 ± 0.48	9.14 ± 0.94	9.08 ± 0.64	14.39 ± 0.71	15.0 3 ± 0.12	14. 24 ± 1.2 9	15.8 9 ± 0.42	15.3 4 ± 0.43	17.2 9 ± 0.12
	Ankle ROM (°)	18.92 ± 1.70	21.83 ± 0.82	15.93 ± 1.98	14.19 ± 0.83	23.42 ± 0.81	26.6 3 ± 0.24	29. 17 ± 2.8 6	26.3 7 ± 0.67	25.6 5 ± 1.71	27.0 9 ± 0.13

Supplemental Table 1: Mean spatial and kinematic values calculated from 3 middle steps of 3 walking trials of each limb for each participant in seconds (s) and degrees (°). Abbreviations: DF= dorsiflexion; PF= plantarflexion; ROM= range of motion; Flex= flexion; Ext= extension.