

**Table S1.** Experimental summary, including information on subjects and trials, and body segment properties from CT scans for KM07.

<b>Subject #</b>	<b>Mass (g)</b>	<b>SVL (mm)</b>	<b># Trials</b>	
KM03	25.5	58	12	
KM04	25.5	60	15	
KM05	34.6	61	8	
KM06	28.1	61	15	

<b>Segment</b>	<b>Mass (g)</b>	<b>I<sub>x</sub> (g cm<sup>2</sup>)</b>	<b>I<sub>y</sub> (g cm<sup>2</sup>)</b>	<b>I<sub>z</sub> (g cm<sup>2</sup>)</b>
Body	7.2	33.52	4.73	33.78
Pelvis	1.3	0.72	0.34	0.7
Thigh	0.78	0.79	0.08	0.79
Shank	0.36	0.37	0.02	0.37
Tarsus	0.16	0.06	0.005	0.06
Foot	0.16	0.09	0.005	0.09

**Table S2.** Experimental data and results from inverse dynamics analyses during jumping in *Kassina maculata*, including: forces (single foot) exerted on the ground, kinematic performance metrics, joint and body angles (minimum, maximum and range), 3D external joint moment arm lengths, and external joint moments (torques - 3D, XY and XZ) for four individuals and 50 trials.

Trial	Peak Vertical Force (N)	Peak Fore-Aft Force (N)	Vertical/Fore-aft Force Ratio	Peak Total Force (N)	% Body Weight of Total Force	Vertical/Horizontal Time Ratio
KM03_HOP_01	-0.16	-0.11	1.50	0.26	1.03	1.00
KM03_HOP_02	-0.17	-0.11	1.61	0.26	1.05	0.93
KM03_HOP_03	-0.17	-0.14	1.22	0.27	1.09	0.90
KM03_HOP_04	-0.25	-0.17	1.49	0.39	1.55	0.99
KM03_HOP_05	-0.39	-0.12	3.20	0.56	2.25	1.00
KM03_HOP_06	-0.33	-0.12	2.76	0.48	1.92	1.02
KM03_HOP_07	-0.31	-0.14	2.26	0.45	1.81	1.02
KM03_HOP_08	-0.33	-0.12	2.70	0.49	1.95	1.02
KM03_HOP_09	-0.35	-0.15	2.43	0.52	2.08	1.01
KM03_HOP_10	-0.14	-0.10	1.34	0.21	0.84	0.94
KM03_HOP_11	-0.24	-0.17	1.38	0.38	1.50	0.98
KM03_HOP_12	-0.19	-0.14	1.40	0.29	1.17	0.91
KM04_HOP_01	-0.30	-0.17	1.79	0.46	1.79	0.98
KM04_HOP_02	-0.17	-0.20	0.82	0.29	1.11	0.76
KM04_HOP_03	-0.16	-0.14	1.16	0.27	1.05	1.00
KM04_HOP_04	-0.14	-0.11	1.22	0.21	0.83	0.93
KM04_HOP_05	-0.19	-0.13	1.45	0.29	1.15	0.88
KM04_HOP_06	-0.37	-0.20	1.86	0.56	2.17	0.96
KM04_HOP_07	-0.29	-0.13	2.32	0.43	1.66	1.02
KM04_HOP_08	-0.18	-0.06	2.88	0.25	1.05	0.86
KM04_HOP_09	-0.21	-0.18	1.13	0.33	1.38	0.90
KM04_HOP_10	-0.15	-0.14	1.07	0.24	0.98	0.81
KM04_HOP_11	-0.18	-0.19	0.92	0.29	1.19	0.90
KM04_HOP_12	-0.16	-0.11	1.45	0.26	1.07	1.00
KM04_HOP_13	-0.30	-0.16	1.90	0.45	1.87	0.94
KM04_HOP_14	-0.34	-0.21	1.64	0.52	2.15	1.02
KM04_HOP_15	-0.40	-0.19	2.10	0.59	2.46	1.00
KM05_HOP_01	-0.33	-0.26	1.29	0.53	1.56	0.99
KM05_HOP_02	-0.18	-0.19	0.94	0.31	0.91	0.99
KM05_HOP_03	-0.30	-0.25	1.18	0.49	1.43	1.02
KM05_HOP_04	-0.20	-0.17	1.15	0.31	0.92	0.91
KM05_HOP_05	-0.32	-0.20	1.56	0.50	1.46	0.99
KM05_HOP_06	-0.24	-0.17	1.41	0.38	1.13	0.98
KM05_HOP_07	-0.41	-0.26	1.58	0.62	1.83	1.06
KM05_HOP_08	-0.46	-0.17	2.65	0.66	1.96	0.98
KM06_HOP_01	-0.17	-0.22	0.76	0.31	1.11	0.89
KM06_HOP_02	-0.33	-0.21	1.58	0.49	1.78	0.89
KM06_HOP_03	-0.20	-0.20	0.97	0.34	1.22	0.96
KM06_HOP_04	-0.20	-0.23	0.85	0.37	1.33	0.99

Table S2 (cont.)

<b>Trial</b>	<b>Peak Vertical Force (N)</b>	<b>Peak Fore-Aft Force (N)</b>	<b>Vertical/Fore-aft Force Ratio</b>	<b>Peak Total Force (N)</b>	<b>% Body Weight of Total Force</b>	<b>Vertical/Horizontal Time Ratio</b>
<i>KM06_HOP_05</i>	-0.16	-0.19	0.84	0.30	1.07	1.02
<i>KM06_HOP_06</i>	-0.32	-0.18	1.79	0.48	1.75	0.97
<i>KM06_HOP_07</i>	-0.19	-0.23	0.82	0.35	1.27	0.98
<i>KM06_HOP_08</i>	-0.22	-0.17	1.30	0.35	1.26	1.00
<i>KM06_HOP_09</i>	-0.30	-0.19	1.60	0.46	1.66	0.93
<i>KM06_HOP_10</i>	-0.35	-0.15	2.30	0.51	1.86	0.94
<i>KM06_HOP_11</i>	-0.34	-0.20	1.65	0.52	1.88	0.98
<i>KM06_HOP_12</i>	-0.41	-0.25	1.61	0.60	2.20	0.91
<i>KM06_HOP_13</i>	-0.36	-0.17	2.13	0.54	1.97	1.00
<i>KM06_HOP_14</i>	-0.38	-0.16	2.30	0.55	2.01	0.96
<i>KM06_HOP_15</i>	-0.35	-0.21	1.62	0.53	1.94	1.02

Table S2 (cont.)

Trial	Peak Velocity (ms <sup>-1</sup> )	Peak Velocity (SVL)	Peak Acceleration (ms <sup>-2</sup> )	Angle at Take-off (°)	Jump Distance (m)
KM03_HOP_01	0.84	14.52	27.54	7.03	0.07
KM03_HOP_02	0.92	15.80	22.62	8.53	0.05
KM03_HOP_03	0.80	13.84	22.01	6.65	0.06
KM03_HOP_04	1.11	19.12	30.90	35.34	0.11
KM03_HOP_05	1.70	29.28	49.43	69.18	0.21
KM03_HOP_06	1.46	25.23	36.03	63.15	0.17
KM03_HOP_07	1.46	25.21	28.66	58.29	0.22
KM03_HOP_08	1.34	23.05	25.06	54.13	0.16
KM03_HOP_09	1.65	28.43	34.81	59.94	0.27
KM03_HOP_10	0.85	14.67	45.08	7.43	0.08
KM03_HOP_11	1.14	19.64	36.37	23.13	0.12
KM03_HOP_12	1.15	19.87	32.50	19.56	0.14
KM04_HOP_01	1.34	22.72	28.69	46.44	0.21
KM04_HOP_02	1.26	21.27	25.96	5.63	0.05
KM04_HOP_03	1.18	19.99	23.70	23.93	0.17
KM04_HOP_04	0.99	16.77	15.65	0.27	0.08
KM04_HOP_05	1.29	21.79	21.14	34.09	0.19
KM04_HOP_06	1.72	29.16	40.09	52.70	0.30
KM04_HOP_07	1.46	24.67	32.26	53.77	0.24
KM04_HOP_08	0.67	10.98	35.52	20.81	0.03
KM04_HOP_09	1.25	20.50	22.96	23.37	0.17
KM04_HOP_10	1.14	18.76	19.22	14.20	0.14
KM04_HOP_11	1.32	21.58	23.19	10.84	0.13
KM04_HOP_12	0.83	13.63	32.76	1.52	0.07
KM04_HOP_13	1.44	23.69	47.85	50.07	0.23
KM04_HOP_14	1.84	30.22	46.61	57.20	0.32
KM04_HOP_15	2.02	33.07	53.94	60.45	0.34
KM05_HOP_01	1.50	24.61	29.99	23.41	0.20
KM05_HOP_02	1.35	22.14	31.39	28.23	0.22
KM05_HOP_03	1.71	28.07	46.34	41.48	0.32
KM05_HOP_04	1.11	18.23	19.39	7.02	0.11
KM05_HOP_05	1.60	26.30	35.16	47.46	0.29
KM05_HOP_06	1.29	21.12	28.70	34.09	0.18
KM05_HOP_07	1.47	24.15	36.34	51.09	0.25
KM05_HOP_08	1.73	28.29	79.48	53.08	0.34
KM06_HOP_01	1.39	22.82	35.18	16.49	0.17
KM06_HOP_02	1.61	26.37	43.95	34.46	0.29
KM06_HOP_03	1.22	20.02	28.10	20.51	0.13
KM06_HOP_04	1.49	24.40	29.41	24.62	0.23
KM06_HOP_05	1.33	21.85	53.10	17.80	0.11
KM06_HOP_06	1.39	22.83	31.99	40.39	0.24
KM06_HOP_07	1.43	23.41	43.60	27.67	0.20
KM06_HOP_08	1.33	21.79	69.22	33.37	0.19

**Table S2 (cont.)**

<b>Trial</b>	<b>Peak Velocity (m/s)</b>	<b>Peak Velocity (SVL)</b>	<b>Peak Acceleration (m/s<sup>2</sup>)</b>	<b>Angle at Take-off (°)</b>	<b>Jump Distance (m)</b>
<i>KM06_HOP_09</i>	1.45	23.83	34.71	44.31	0.25
<i>KM06_HOP_10</i>	1.51	24.77	42.06	47.90	0.28
<i>KM06_HOP_11</i>	1.61	26.42	42.04	46.40	0.31
<i>KM06_HOP_12</i>	1.60	26.18	42.09	44.70	0.28
<i>KM06_HOP_13</i>	1.40	22.88	43.74	46.43	0.23
<i>KM06_HOP_14</i>	1.56	25.58	34.49	51.00	0.27
<i>KM06_HOP_15</i>	1.64	26.81	36.89	44.48	0.31

Table S2 (cont.)

Trial	Ankle Range (°)	Ankle Min (°)	Ankle Max (°)	Knee Range (°)	Knee Min (°)	Knee Max (°)
KM03_HOP_01	77.96	47.88	125.84	87.94	34.38	122.32
KM03_HOP_02	85.37	43.51	128.88	76.69	37.64	114.33
KM03_HOP_03	81.38	50.33	131.72	90.00	31.99	121.99
KM03_HOP_04	95.64	53.05	148.69	113.51	28.30	141.81
KM03_HOP_05	111.84	42.33	154.17	126.50	29.82	156.32
KM03_HOP_06	106.19	42.95	149.14	116.95	33.92	150.87
KM03_HOP_07	115.48	35.46	150.94	122.76	32.04	154.80
KM03_HOP_08	118.04	38.80	156.85	121.94	32.48	154.43
KM03_HOP_09	91.78	57.98	149.75	88.78	23.45	112.24
KM03_HOP_10	81.77	61.04	142.81	77.44	18.49	95.93
KM03_HOP_11	83.64	59.14	142.79	94.01	18.14	112.14
KM03_HOP_12	94.68	50.70	145.39	94.17	18.76	112.93
KM04_HOP_01	114.47	48.60	163.07	125.38	37.11	162.49
KM04_HOP_02	113.04	41.68	154.71	90.00	49.99	139.99
KM04_HOP_03	116.63	38.55	155.18	94.73	59.25	153.98
KM04_HOP_04	96.05	45.06	141.11	86.45	47.65	134.09
KM04_HOP_05	112.35	46.05	158.40	108.07	40.17	148.24
KM04_HOP_06	119.51	42.04	161.54	121.73	39.93	161.66
KM04_HOP_07	114.19	44.97	159.16	117.58	36.22	153.80
KM04_HOP_08	90.99	38.60	129.59	89.99	38.55	128.54
KM04_HOP_09	108.62	31.88	140.50	111.41	35.99	147.40
KM04_HOP_10	91.21	46.92	138.14	107.50	29.28	136.78
KM04_HOP_11	94.33	43.38	137.71	103.34	34.38	137.72
KM04_HOP_12	87.86	43.74	131.59	100.27	33.99	134.26
KM04_HOP_13	91.67	49.51	141.18	123.09	27.85	150.93
KM04_HOP_14	89.09	49.97	139.06	121.13	30.02	151.16
KM04_HOP_15	93.58	50.20	143.78	120.24	32.47	152.71
KM05_HOP_01	102.56	46.56	149.11	112.30	32.99	145.30
KM05_HOP_02	105.56	42.71	148.27	113.36	29.94	143.30
KM05_HOP_03	101.90	49.51	151.42	111.77	28.63	140.40
KM05_HOP_04	97.80	40.04	137.84	92.43	31.32	123.75
KM05_HOP_05	95.64	50.38	146.02	114.37	28.49	142.86
KM05_HOP_06	101.82	40.83	142.65	113.81	26.61	140.42
KM05_HOP_07	103.38	50.89	154.27	123.57	29.31	152.88
KM05_HOP_08	100.78	51.31	152.09	116.74	38.47	155.21
KM06_HOP_01	94.52	52.70	147.22	110.65	30.00	140.65
KM06_HOP_02	111.65	45.83	157.48	114.15	33.93	148.08
KM06_HOP_03	95.49	52.35	147.84	102.57	39.82	142.39
KM06_HOP_04	97.61	56.45	154.06	114.87	30.71	145.58
KM06_HOP_05	101.47	49.03	150.50	112.66	29.49	142.14
KM06_HOP_06	109.52	43.38	152.90	113.57	33.24	146.82
KM06_HOP_07	100.99	49.04	150.03	115.09	29.00	144.09
KM06_HOP_08	100.07	53.97	154.04	88.47	51.32	139.79

**Table S2 (cont.)**

<b>Trial</b>	<b>Ankle Range (°)</b>	<b>Ankle Min (°)</b>	<b>Ankle Max (°)</b>	<b>Knee Range (°)</b>	<b>Knee Min (°)</b>	<b>Knee Max (°)</b>
<i>KM06_HOP_09</i>	101.48	49.98	151.46	116.45	30.14	146.58
<i>KM06_HOP_10</i>	110.56	45.47	156.02	111.86	27.65	139.50
<i>KM06_HOP_11</i>	92.82	48.41	141.24	113.31	32.96	146.27
<i>KM06_HOP_12</i>	107.42	46.36	153.78	105.66	27.87	133.54
<i>KM06_HOP_13</i>	110.43	48.82	159.25	114.03	29.92	143.96
<i>KM06_HOP_14</i>	115.70	41.24	156.94	118.60	25.98	144.58
<i>KM06_HOP_15</i>	109.87	45.07	154.94	115.88	29.53	145.41

Table S2 (cont.)

Trial	Hip Range (°)	Hip Min (°)	Hip Max (°)	Sacroiliac Range (°)	Sacroiliac Min (°)	Sacroiliac Max (°)
KM03_HOP_01	74.02	62.97	136.99	19.07	146.45	165.52
KM03_HOP_02	74.65	56.57	131.22	9.16	148.67	157.84
KM03_HOP_03	79.33	59.42	138.76	15.16	151.01	166.17
KM03_HOP_04	88.43	51.92	140.35	24.08	138.12	162.20
KM03_HOP_05	96.86	49.64	146.50	23.43	140.04	163.47
KM03_HOP_06	91.23	56.01	147.24	29.02	137.70	166.72
KM03_HOP_07	102.83	43.80	146.63	28.42	136.98	165.39
KM03_HOP_08	101.55	44.90	146.45	27.65	137.24	164.89
KM03_HOP_09	61.64	39.51	101.16	23.03	146.24	169.27
KM03_HOP_10	62.22	52.99	115.21	22.72	143.85	166.57
KM03_HOP_11	69.88	45.83	115.71	19.76	145.90	165.66
KM03_HOP_12	79.33	39.57	118.90	20.96	140.60	161.56
KM04_HOP_01	96.04	50.04	146.08	17.49	133.13	150.62
KM04_HOP_02	97.37	47.35	144.72	24.42	129.46	153.89
KM04_HOP_03	83.61	56.06	139.67	14.65	137.92	152.57
KM04_HOP_04	71.71	70.54	142.25	10.35	145.59	155.93
KM04_HOP_05	73.63	71.08	144.71	6.21	144.39	150.60
KM04_HOP_06	97.54	54.30	151.84	16.29	144.72	161.01
KM04_HOP_07	86.35	63.05	149.40	17.89	143.29	161.18
KM04_HOP_08	63.86	87.38	151.24	14.84	145.61	160.44
KM04_HOP_09	87.16	65.30	152.46	14.23	143.14	157.37
KM04_HOP_10	72.39	86.40	158.80	14.47	147.63	162.10
KM04_HOP_11	90.04	76.05	166.09	28.31	138.53	166.84
KM04_HOP_12	87.75	62.72	150.47	10.66	145.79	156.45
KM04_HOP_13	93.09	66.65	159.74	12.27	147.58	159.84
KM04_HOP_14	94.00	64.83	158.83	12.97	141.78	154.75
KM04_HOP_15	97.01	63.81	160.81	25.64	141.85	167.49
KM05_HOP_01	89.33	49.35	138.68	19.16	146.88	166.03
KM05_HOP_02	83.05	56.21	139.25	16.04	143.96	160.00
KM05_HOP_03	83.91	51.69	135.60	24.41	147.89	172.30
KM05_HOP_04	68.41	61.57	129.98	16.63	143.97	160.60
KM05_HOP_05	80.51	61.89	142.41	22.80	149.72	172.51
KM05_HOP_06	83.28	52.07	135.35	17.69	148.39	166.08
KM05_HOP_07	90.43	56.97	147.41	28.91	144.91	173.81
KM05_HOP_08	92.76	58.55	151.31	19.29	152.64	171.93
KM06_HOP_01	78.08	55.40	133.48	6.49	153.81	160.31
KM06_HOP_02	87.12	54.72	141.84	14.72	149.34	164.06
KM06_HOP_03	86.91	44.58	131.49	13.86	145.38	159.24
KM06_HOP_04	76.99	61.16	138.15	16.64	146.31	162.95
KM06_HOP_05	72.53	60.92	133.44	17.16	141.91	159.07
KM06_HOP_06	85.74	50.89	136.63	19.02	149.23	168.25
KM06_HOP_07	80.81	59.35	140.16	12.15	149.99	162.14
KM06_HOP_08	76.24	53.23	129.48	19.18	139.88	159.06



**Table S2 (cont.)**

<b>Trial</b>	<b>Hip Range (°)</b>	<b>Hip Min (°)</b>	<b>Hip Max (°)</b>	<b>Sacroiliac Range (°)</b>	<b>Sacroiliac Min (°)</b>	<b>Sacroiliac Max (°)</b>
<i>KM06_HOP_09</i>	85.01	56.42	141.43	24.19	142.65	166.83
<i>KM06_HOP_10</i>	86.04	48.59	134.63	23.10	145.75	168.85
<i>KM06_HOP_11</i>	87.20	49.87	137.07	15.70	153.89	169.59
<i>KM06_HOP_12</i>	84.27	46.11	130.39	17.11	152.34	169.45
<i>KM06_HOP_13</i>	91.92	46.55	138.47	24.12	146.03	170.15
<i>KM06_HOP_14</i>	92.31	44.88	137.19	27.68	140.45	168.13
<i>KM06_HOP_15</i>	97.02	39.06	136.08	17.58	148.95	166.53

Table S2 (cont.)

Trial	Sacroiliac Take-off (°)	Body Range (°)	Body Min (°)	Body Max (°)	Body Take-off (°)
KM03_HOP_01	162.93	17.18	6.56	23.73	23.59
KM03_HOP_02	156.41	10.09	2.44	12.53	2.44
KM03_HOP_03	165.71	19.41	11.73	31.14	31.14
KM03_HOP_04	160.35	20.90	10.60	31.51	30.13
KM03_HOP_05	162.67	38.62	17.68	56.30	55.21
KM03_HOP_06	164.91	29.21	30.65	59.85	59.85
KM03_HOP_07	165.23	30.88	23.20	54.08	53.78
KM03_HOP_08	159.76	32.20	20.34	52.54	52.54
KM03_HOP_09	168.51	19.53	20.98	40.51	38.85
KM03_HOP_10	166.21	7.12	14.06	21.18	19.08
KM03_HOP_11	158.80	9.01	12.05	21.06	14.85
KM03_HOP_12	157.39	7.17	13.32	20.49	13.32
KM04_HOP_01	149.05	9.32	23.17	32.49	23.17
KM04_HOP_02	150.07	6.68	0.08	6.76	2.52
KM04_HOP_03	151.22	10.28	8.52	18.79	8.52
KM04_HOP_04	154.70	13.47	0.57	14.04	6.02
KM04_HOP_05	150.60	8.35	21.05	29.40	21.05
KM04_HOP_06	160.10	21.71	22.95	44.67	42.06
KM04_HOP_07	158.74	23.14	26.58	49.72	45.93
KM04_HOP_08	152.84	8.94	15.29	24.23	15.29
KM04_HOP_09	156.03	8.39	15.86	24.24	17.64
KM04_HOP_10	159.31	8.50	16.95	25.45	24.51
KM04_HOP_11	166.43	9.34	7.08	16.42	13.76
KM04_HOP_12	156.45	8.68	12.57	21.25	12.57
KM04_HOP_13	154.55	23.60	23.71	47.31	45.17
KM04_HOP_14	153.75	22.45	27.52	49.97	46.96
KM04_HOP_15	167.00	30.91	27.79	58.70	56.98
KM05_HOP_01	159.02	9.78	12.04	21.82	16.15
KM05_HOP_02	159.37	8.72	11.34	20.06	12.24
KM05_HOP_03	164.34	13.38	17.11	30.49	25.47
KM05_HOP_04	158.66	9.31	2.30	11.61	2.30
KM05_HOP_05	172.51	18.18	23.43	41.61	39.92
KM05_HOP_06	164.59	8.09	18.71	26.81	24.18
KM05_HOP_07	169.03	32.36	15.39	47.75	42.14
KM05_HOP_08	170.31	20.75	25.96	46.71	44.70
KM06_HOP_01	158.68	12.58	3.77	16.34	3.77
KM06_HOP_02	162.89	3.63	23.36	26.99	23.60
KM06_HOP_03	153.90	16.30	2.06	18.36	2.06
KM06_HOP_04	162.95	11.96	9.31	21.27	9.31
KM06_HOP_05	156.13	13.54	2.57	16.11	2.57
KM06_HOP_06	163.47	14.24	19.38	33.61	25.61
KM06_HOP_07	162.14	7.68	14.34	22.02	14.34
KM06_HOP_08	158.27	9.54	17.66	27.21	17.66

**Table S2 (cont.)**

<b>Trial</b>	<b>Sacroiliac Take-off (°)</b>	<b>Body Range (°)</b>	<b>Body Min (°)</b>	<b>Body Max (°)</b>	<b>Body Take- off (°)</b>
<i>KM06_HOP_09</i>	161.50	20.86	14.95	35.81	29.29
<i>KM06_HOP_10</i>	164.68	17.60	24.97	42.57	37.10
<i>KM06_HOP_11</i>	164.48	16.69	23.09	39.78	33.02
<i>KM06_HOP_12</i>	165.20	13.13	24.98	38.11	33.78
<i>KM06_HOP_13</i>	168.47	19.91	25.44	45.35	43.75
<i>KM06_HOP_14</i>	165.91	19.41	25.49	44.90	43.26
<i>KM06_HOP_15</i>	162.52	16.52	21.36	37.87	34.34

Table S2 (cont.)

<b>Trial</b>	<b>TMT Max Moment Arm (m)</b>	<b>Ankle Max Moment Arm (m)</b>	<b>Knee Max Moment Arm (m)</b>	<b>Hip Max Moment Arm (m)</b>
<i>KM03_HOP_01</i>	0.023	0.032	0.042	0.058
<i>KM03_HOP_02</i>	0.019	0.027	0.044	0.060
<i>KM03_HOP_03</i>	0.023	0.029	0.036	0.047
<i>KM03_HOP_04</i>	0.012	0.013	0.019	0.014
<i>KM03_HOP_05</i>	0.009	0.011	0.019	0.015
<i>KM03_HOP_06</i>	0.015	0.024	0.046	0.063
<i>KM03_HOP_07</i>	0.022	0.031	0.047	0.064
<i>KM03_HOP_08</i>	0.013	0.016	0.015	0.020
<i>KM03_HOP_09</i>	0.014	0.016	0.016	0.019
<i>KM03_HOP_10</i>	0.021	0.029	0.041	0.055
<i>KM03_HOP_11</i>	0.019	0.021	0.033	0.037
<i>KM03_HOP_12</i>	0.014	0.014	0.032	0.034
<i>KM04_HOP_01</i>	0.018	0.023	0.025	0.032
<i>KM04_HOP_02</i>	0.024	0.033	0.050	0.071
<i>KM04_HOP_03</i>	0.021	0.029	0.043	0.058
<i>KM04_HOP_04</i>	0.018	0.021	0.032	0.044
<i>KM04_HOP_05</i>	0.015	0.017	0.018	0.023
<i>KM04_HOP_06</i>	0.014	0.017	0.018	0.023
<i>KM04_HOP_07</i>	0.012	0.014	0.034	0.047
<i>KM04_HOP_08</i>	0.013	0.021	0.035	0.054
<i>KM04_HOP_09</i>	0.022	0.026	0.041	0.059
<i>KM04_HOP_10</i>	0.014	0.018	0.026	0.038
<i>KM04_HOP_11</i>	0.015	0.023	0.043	0.062
<i>KM04_HOP_12</i>	0.023	0.031	0.037	0.050
<i>KM04_HOP_13</i>	0.011	0.016	0.019	0.020
<i>KM04_HOP_14</i>	0.008	0.013	0.018	0.012
<i>KM04_HOP_15</i>	0.007	0.012	0.019	0.016
<i>KM05_HOP_01</i>	0.015	0.017	0.025	0.027
<i>KM05_HOP_02</i>	0.024	0.037	0.058	0.074
<i>KM05_HOP_03</i>	0.016	0.019	0.019	0.021
<i>KM05_HOP_04</i>	0.022	0.028	0.026	0.033
<i>KM05_HOP_05</i>	0.016	0.021	0.019	0.026
<i>KM05_HOP_06</i>	0.023	0.032	0.040	0.052
<i>KM05_HOP_07</i>	0.018	0.022	0.022	0.030
<i>KM05_HOP_08</i>	0.014	0.017	0.017	0.015
<i>KM06_HOP_01</i>	0.022	0.031	0.054	0.069
<i>KM06_HOP_02</i>	0.018	0.028	0.052	0.067
<i>KM06_HOP_03</i>	0.021	0.031	0.052	0.067
<i>KM06_HOP_04</i>	0.022	0.032	0.048	0.062
<i>KM06_HOP_05</i>	0.023	0.033	0.053	0.069
<i>KM06_HOP_06</i>	0.022	0.032	0.051	0.066
<i>KM06_HOP_07</i>	0.012	0.016	0.021	0.029
<i>KM06_HOP_08</i>	0.016	0.027	0.050	0.068

**Table S2 (cont.)**

<b>Trial</b>	<b>TMT Max Moment Arm (m)</b>	<b>Ankle Max Moment Arm (m)</b>	<b>Knee Max Moment Arm (m)</b>	<b>Hip Max Moment Arm (m)</b>
<i>KM06_HOP_09</i>	0.010	0.015	0.018	0.018
<i>KM06_HOP_10</i>	0.012	0.015	0.016	0.020
<i>KM06_HOP_11</i>	0.018	0.024	0.030	0.041
<i>KM06_HOP_12</i>	0.011	0.017	0.016	0.022
<i>KM06_HOP_13</i>	0.018	0.022	0.023	0.032
<i>KM06_HOP_14</i>	0.018	0.029	0.049	0.065
<i>KM06_HOP_15</i>	0.020	0.031	0.050	0.066

Table S2 (cont.)

Trial	TMT 3D Max Torque (N.m)	Ankle 3D Max Torque (N.m)	Knee 3D Max Torque (N.m)	Hip 3D Max Torque (N.m)	TMT XY Max Torque (N.m)	Ankle XY Max Torque (N.m)
KM03_HOP_01	0.001906	0.002583	0.003091	0.001072	0.001781	0.001218
KM03_HOP_02	0.001578	0.002139	0.003083	0.001159	0.001454	0.001353
KM03_HOP_03	0.002008	0.002813	0.003204	0.001625	0.001494	-0.0002
KM03_HOP_04	0.002673	0.003489	0.003622	0.001641	0.001751	0.002016
KM03_HOP_05	0.001693	0.003172	0.004581	0.004374	0.001484	0.002815
KM03_HOP_06	0.002157	0.002662	0.003491	0.003134	0.001378	0.001433
KM03_HOP_07	0.002687	0.003603	0.002306	0.002945	0.001553	0.000937
KM03_HOP_08	0.002618	0.003861	0.002827	0.002903	0.001483	-0.00028
KM03_HOP_09	0.002817	0.003595	0.004216	0.004005	0.001662	0.000811
KM03_HOP_10	0.001188	0.001448	0.00266	0.000887	0.00084	-7.4E-05
KM03_HOP_11	0.002492	0.003191	0.003855	0.00232	0.000791	0.000176
KM03_HOP_12	0.002193	0.002638	0.002867	0.00231	0.000745	8.76E-05
KM04_HOP_01	0.00238	0.004437	0.00223	0.00395	0.000831	0.001099
KM04_HOP_02	0.001975	0.003164	0.002753	0.00409	0.000911	6.61E-05
KM04_HOP_03	0.001845	0.002919	0.001334	0.003714	0.000863	0.001681
KM04_HOP_04	0.001646	0.002531	0.001545	0.001701	0.000738	0.001083
KM04_HOP_05	0.002128	0.003592	0.002448	0.003509	0.001436	0.000986
KM04_HOP_06	0.003725	0.006454	0.003222	0.006653	0.002279	0.000466
KM04_HOP_07	0.002396	0.004336	0.002309	0.004025	0.001153	0.000688
KM04_HOP_08	0.000882	0.001352	0.003097	0.002015	0.000599	0.000129
KM04_HOP_09	0.003293	0.005505	0.002419	0.002289	0.000556	0.001201
KM04_HOP_10	0.002302	0.003201	0.002822	0.001788	0.001485	-4.2E-05
KM04_HOP_11	0.003029	0.004888	0.002696	0.002091	0.00152	0.000615
KM04_HOP_12	0.001383	0.002727	0.002014	0.001489	0.000724	0.000552
KM04_HOP_13	0.003218	0.005288	0.00416	0.002802	0.000668	-0.00016
KM04_HOP_14	0.002415	0.004892	0.003474	0.002814	0.00116	0.000604
KM04_HOP_15	0.002495	0.004848	0.005182	0.003034	0.001236	-9.9E-05
KM05_HOP_01	0.003697	0.006155	0.003563	0.004381	0.003319	0.002403
KM05_HOP_02	0.002425	0.003686	0.001363	0.003105	0.001701	-0.00031
KM05_HOP_03	0.004916	0.007434	0.002401	0.005855	0.00387	0.000399
KM05_HOP_04	0.003109	0.004889	0.002852	0.002733	0.0014	-0.00011
KM05_HOP_05	0.004283	0.006756	0.002608	0.005888	0.001907	-0.00015
KM05_HOP_06	0.00291	0.005075	0.002707	0.00302	0.001191	-0.00057
KM05_HOP_07	0.004527	0.007932	0.004611	0.005534	0.002102	-0.00083
KM05_HOP_08	0.003605	0.00625	0.005082	0.007273	0.00292	0.003491
KM06_HOP_01	0.003181	0.005276	0.00228	0.005791	0.001019	0.000354
KM06_HOP_02	0.003739	0.005996	0.003195	0.006111	0.001202	0.001185
KM06_HOP_03	0.002187	0.00384	0.001328	0.003321	0.001005	0.001128
KM06_HOP_04	0.002439	0.004969	0.002666	0.006414	0.001092	0.000448
KM06_HOP_05	0.002452	0.004111	0.001427	0.004295	0.000988	0.000484
KM06_HOP_06	0.002456	0.004841	0.002471	0.004694	0.002142	0.002165
KM06_HOP_07	0.0024	0.004553	0.001613	0.004519	0.001292	0.000564

Table S2 (cont.)

<b>Trial</b>	<b>TMT 3D Max Torque (N.m)</b>	<b>Ankle 3D Max Torque (N.m)</b>	<b>Knee 3D Max Torque (N.m)</b>	<b>Hip 3D Max Torque (N.m)</b>	<b>TMT XY Max Torque (N.m)</b>	<b>Ankle XY Max Torque (N.m)</b>
<i>KM06_HOP_08</i>	0.002853	0.00462	0.001539	0.004994	0.001773	0.000852
<i>KM06_HOP_09</i>	0.002712	0.004743	0.003048	0.003336	0.001911	-0.00017
<i>KM06_HOP_10</i>	0.002391	0.004526	0.003933	0.004756	0.001794	0.001058
<i>KM06_HOP_11</i>	0.003051	0.005762	0.002293	0.00666	0.002144	0.003973
<i>KM06_HOP_12</i>	0.00331	0.006827	0.00435	0.006057	0.00194	0.000499
<i>KM06_HOP_13</i>	0.003341	0.005878	0.002477	0.004506	0.001805	-0.00078
<i>KM06_HOP_14</i>	0.0028	0.005683	0.002807	0.005751	0.001674	0.000828
<i>KM06_HOP_15</i>	0.00263	0.005778	0.002371	0.005911	0.001429	0.001008

Table S2 (cont.)

Trial	Knee XY	Hip XY Max Torque (N.m)	TMT XY Min Torque (N.m)	Ankle XY	Knee XY Min Torque (N.m)	Hip XY Min Torque (N.m)
	Max Torque (N.m)			Min Torque (N.m)		
KM03_HOP_01	0.002546	0.000779	-0.00065	-0.00232	-0.0011	-0.00071
KM03_HOP_02	0.002573	0.000668	-0.0005	-0.00176	0.000295	-0.00094
KM03_HOP_03	0.002276	0.001247	-0.0018	-0.00264	0.000258	-0.00062
KM03_HOP_04	0.003022	0.000924	-0.00174	-0.00306	0.000193	-0.00139
KM03_HOP_05	0.002794	0.001493	-0.00083	-0.00098	-0.00303	-0.00386
KM03_HOP_06	0.003232	0.002002	-0.00069	-0.00236	-0.00216	-0.00282
KM03_HOP_07	0.00202	-0.00045	-0.00174	-0.00314	-0.00141	-0.00256
KM03_HOP_08	0.002617	0.000206	-0.00157	-0.00349	-0.00015	-0.00265
KM03_HOP_09	0.003702	0.001091	-0.00181	-0.00327	-0.00176	-0.00346
KM03_HOP_10	0.002136	0.000487	-0.00095	-0.00135	0.000193	-0.00055
KM03_HOP_11	0.003231	0.000826	-0.00213	-0.00294	-0.00127	-0.00189
KM03_HOP_12	0.002593	0.000376	-0.00185	-0.00236	-0.00186	-0.00188
KM04_HOP_01	0.002	0.000855	-0.00203	-0.00398	-0.00137	-0.00343
KM04_HOP_02	0.002062	0.000876	-0.00162	-0.00286	0.000202	-0.00295
KM04_HOP_03	0.000614	0.000438	-0.00139	-0.0027	-0.00108	-0.00301
KM04_HOP_04	0.001358	0.00067	-0.00147	-0.00242	-0.00106	-0.00138
KM04_HOP_05	0.001762	0.000601	-0.00164	-0.00339	-0.00138	-0.0028
KM04_HOP_06	0.00233	0.000801	-0.00204	-0.00592	-0.00102	-0.00558
KM04_HOP_07	0.002002	0.001146	-0.00184	-0.00392	-0.00149	-0.00346
KM04_HOP_08	0.002933	0.001894	-0.00078	-0.00126	0.000263	-0.00149
KM04_HOP_09	0.002009	0.000488	-0.003	-0.00487	-0.00104	-0.00182
KM04_HOP_10	0.002586	0.001319	-0.00196	-0.00292	-0.00014	-0.00117
KM04_HOP_11	0.00242	0.001063	-0.00257	-0.00433	-0.00179	-0.0017
KM04_HOP_12	0.001677	0.000502	-0.00121	-0.00237	-0.00097	-0.00116
KM04_HOP_13	0.003639	0.001083	-0.00283	-0.0047	0.000465	-0.00231
KM04_HOP_14	0.002971	0.001013	-0.00153	-0.00435	-0.00154	-0.00197
KM04_HOP_15	0.004641	0.001127	-0.00158	-0.0043	0.000658	-0.0026
KM05_HOP_01	0.002986	0.000471	-0.00041	-0.00562	-0.00178	-0.00344
KM05_HOP_02	0.001044	0.000325	0.000222	-0.00334	-0.00072	-0.00232
KM05_HOP_03	0.002146	0.000907	-0.00216	-0.00676	-0.00142	-0.00461
KM05_HOP_04	0.002452	-1.7E-05	-0.00286	-0.00448	0.000239	-0.00216
KM05_HOP_05	0.002422	0.000832	-0.00333	-0.00623	-0.00036	-0.00468
KM05_HOP_06	0.002383	0.000297	-0.00255	-0.00451	-0.00036	-0.00225
KM05_HOP_07	0.003531	0.000684	-0.00372	-0.00711	-0.0007	-0.0045
KM05_HOP_08	0.000163	0.001621	-0.0004	-0.00546	-0.00454	-0.00626
KM06_HOP_01	0.00077	0.000546	-0.00265	-0.00449	-0.00172	-0.00415
KM06_HOP_02	0.000305	0.00027	-0.00307	-0.00549	-0.0027	-0.00504
KM06_HOP_03	0.000493	0.000829	-0.0017	-0.00348	-0.00099	-0.00258
KM06_HOP_04	-0.00072	0.001419	-0.00222	-0.00424	-0.00245	-0.00414
KM06_HOP_05	0.000915	0.000828	-0.00208	-0.00354	-0.00131	-0.00285
KM06_HOP_06	-0.00023	-0.00049	-0.00071	-0.00445	-0.00202	-0.00408
KM06_HOP_07	0.00128	0.00052	-0.00198	-0.00397	-0.00137	-0.00308



Table S2 (cont.)

<b>Trial</b>	<b>Knee XY Max Torque (N.m)</b>	<b>Hip XY Max Torque (N.m)</b>	<b>TMT XY Min Torque (N.m)</b>	<b>Ankle XY Min Torque (N.m)</b>	<b>Knee XY Min Torque (N.m)</b>	<b>Hip XY Min Torque (N.m)</b>
<i>KM06_HOP_08</i>	0.000592	0.001413	-0.00211	-0.00425	-0.00142	-0.00395
<i>KM06_HOP_09</i>	0.002608	0.00062	-0.00147	-0.00435	-0.00055	-0.00274
<i>KM06_HOP_10</i>	0.002671	0.002164	-0.00123	-0.00415	-0.00323	-0.00402
<i>KM06_HOP_11</i>	0.00066	0.001378	-0.00177	-0.00474	-0.00188	-0.00576
<i>KM06_HOP_12</i>	0.0036	0.000892	-0.00259	-0.00618	-0.00101	-0.0049
<i>KM06_HOP_13</i>	0.002197	-0.00092	-0.00242	-0.00537	-0.00088	-0.00404
<i>KM06_HOP_14</i>	0.002279	-0.00066	-0.0019	-0.00516	-0.00126	-0.00509
<i>KM06_HOP_15</i>	-0.00047	0.00101	-0.00181	-0.00531	-0.00199	-0.00505

Table S2 (cont.)

Trial	TMT XZ Max Torque (N.m)	Ankle XZ Max Torque (N.m)	Knee XZ Max Torque (N.m)	Hip XZ Max Torque (N.m)	TMT XZ Min Torque (N.m)	Ankle XZ Min Torque (N.m)
KM03_HOP_01	-4.1E-05	4.77E-05	-0.00016	0.000434	-0.00155	-0.0023
KM03_HOP_02	-3.1E-05	-0.00013	-0.00033	0.000671	-0.00123	-0.00189
KM03_HOP_03	-8.1E-05	0.000251	-5E-05	0.000546	-0.00183	-0.00263
KM03_HOP_04	-0.00011	0.000505	-0.00019	0.000924	-0.00223	-0.00321
KM03_HOP_05	-9.2E-05	0.002318	0.001534	0.001735	-0.0008	-0.00135
KM03_HOP_06	-4.7E-05	0.002355	0.001847	0.00106	-0.00152	0.000227
KM03_HOP_07	-4.8E-05	0.003168	0.001315	0.001783	-0.00223	0.000384
KM03_HOP_08	-9.4E-05	0.003255	-0.00011	0.001409	-0.00214	-0.00133
KM03_HOP_09	-8.8E-05	0.002081	0.002244	0.002295	-0.00213	-0.00142
KM03_HOP_10	3.1E-05	0.000564	0.000148	0.000559	-0.00104	-0.00137
KM03_HOP_11	-5.8E-05	0.00193	0.000131	0.001489	-0.00208	-0.00277
KM03_HOP_12	-4.8E-05	0.002192	0.000117	0.001511	-0.00193	-0.00162
KM04_HOP_01	0.00123	0.003772	-0.00031	0.001892	-0.00122	-0.00074
KM04_HOP_02	-4.2E-05	0.002402	-4.7E-05	0.00356	-0.00163	-0.00183
KM04_HOP_03	0.000692	0.002692	0.001178	0.002167	-0.0009	-0.00049
KM04_HOP_04	0.000769	0.002365	-0.00018	0.00111	-0.00142	-0.00099
KM04_HOP_05	0.001924	0.003245	-0.00022	0.002025	-0.00074	-0.00015
KM04_HOP_06	0.002651	0.005685	0.000171	0.003597	-0.00107	-0.0006
KM04_HOP_07	0.001994	0.003542	0.000267	0.001672	-0.00083	0.000247
KM04_HOP_08	-1.1E-05	0.001221	-9.5E-05	0.0019	-0.00076	-0.00092
KM04_HOP_09	0.001239	0.005023	-0.00036	0.001849	-0.0025	-0.00035
KM04_HOP_10	0.002033	0.002969	0.000127	0.001328	-0.00114	-6.8E-05
KM04_HOP_11	0.002665	0.004401	-0.00018	0.00167	-0.00115	-0.00012
KM04_HOP_12	-1.5E-05	0.002451	0.000453	0.000724	-0.00128	-0.00027
KM04_HOP_13	-3.6E-05	0.004627	-0.00034	0.001259	-0.00289	-0.00015
KM04_HOP_14	0.000219	0.004115	-0.00041	0.0015	-0.00113	0.000222
KM04_HOP_15	0.001116	0.003994	-0.00031	0.002321	-0.00152	-8.5E-05
KM05_HOP_01	-0.00017	0.005502	-0.00031	0.002989	-0.00327	-0.0017
KM05_HOP_02	-9.2E-05	0.003368	-0.00046	0.002181	-0.00221	-0.00116
KM05_HOP_03	-9.8E-05	0.006686	1.11E-05	0.004093	-0.00453	-0.00025
KM05_HOP_04	-0.00013	0.00456	-0.00025	0.002338	-0.00295	-0.0009
KM05_HOP_05	0.003397	0.006017	0.000353	0.003414	-0.0011	-0.00064
KM05_HOP_06	-9.4E-05	0.00463	-0.00038	0.002079	-0.00272	-0.00054
KM05_HOP_07	0.001828	0.006695	-0.0004	0.003203	-0.00291	-0.0028
KM05_HOP_08	-6.5E-05	0.005545	0.003471	0.002391	-0.00319	0.000124
KM06_HOP_01	0.00275	0.004461	0.001816	0.004509	-0.00045	0.000142
KM06_HOP_02	0.003176	0.004996	0.001612	0.003964	-0.00041	0.000322
KM06_HOP_03	0.00147	0.003521	0.000987	0.002451	-0.00123	-0.00021
KM06_HOP_04	0.00227	0.00392	0.001926	0.004389	-0.00037	9.26E-05
KM06_HOP_05	0.002181	0.003499	0.000916	0.003134	-0.00029	0.000185
KM06_HOP_06	-0.0003	0.004349	0.002097	0.002491	-0.00222	5E-05
KM06_HOP_07	0.002186	0.003864	0.000619	0.003296	-0.00078	0.000124

Table S2 (cont.)

<b>Trial</b>	<b>TMT XZ Max Torque (N.m)</b>	<b>Ankle XZ Max Torque (N.m)</b>	<b>Knee XZ Max Torque (N.m)</b>	<b>Hip XZ Max Torque (N.m)</b>	<b>TMT XZ Min Torque (N.m)</b>	<b>Ankle XZ Min Torque (N.m)</b>
<i>KM06_HOP_08</i>	0.002205	0.004161	0.001105	0.003289	-0.00152	-0.00033
<i>KM06_HOP_09</i>	0.001809	0.004141	0.000415	0.001933	-0.00158	-0.00022
<i>KM06_HOP_10</i>	0.001225	0.00388	0.002409	0.001754	-0.00166	0.000346
<i>KM06_HOP_11</i>	0.002136	0.00518	0.001985	0.003535	-0.00199	0.000124
<i>KM06_HOP_12</i>	0.002916	0.00583	0.000644	0.003827	-0.001	0.000407
<i>KM06_HOP_13</i>	0.00205	0.005225	0.000689	0.00291	-0.00214	0.000746
<i>KM06_HOP_14</i>	0.002081	0.00465	0.000898	0.002647	-0.00113	0.000472
<i>KM06_HOP_15</i>	0.001802	0.005065	0.000988	0.003747	-0.00135	0.000539

Table S2 (cont.)

<b>Trial</b>	<b>Knee XZ Min Torque (N.m)</b>	<b>Hip XZ Min Torque (N.m)</b>
<i>KM03_HOP_01</i>	-0.00229	-0.00058
<i>KM03_HOP_02</i>	-0.00242	-0.00079
<i>KM03_HOP_03</i>	-0.0023	-0.00099
<i>KM03_HOP_04</i>	-0.00297	-0.00042
<i>KM03_HOP_05</i>	-0.0041	-0.0015
<i>KM03_HOP_06</i>	-0.00309	0.000101
<i>KM03_HOP_07</i>	-0.00181	0.000205
<i>KM03_HOP_08</i>	-0.00245	9.18E-05
<i>KM03_HOP_09</i>	-0.00019	0.000126
<i>KM03_HOP_10</i>	-0.00213	-0.00022
<i>KM03_HOP_11</i>	-0.00332	-0.00121
<i>KM03_HOP_12</i>	-0.00261	-0.00034
<i>KM04_HOP_01</i>	-0.00183	-0.00047
<i>KM04_HOP_02</i>	-0.00229	-0.00079
<i>KM04_HOP_03</i>	-0.00052	-0.00052
<i>KM04_HOP_04</i>	-0.00122	-0.00077
<i>KM04_HOP_05</i>	-0.00188	-3E-05
<i>KM04_HOP_06</i>	-0.00262	-3.46E-06
<i>KM04_HOP_07</i>	-0.00177	0.000143
<i>KM04_HOP_08</i>	-0.00243	-0.00066
<i>KM04_HOP_09</i>	-0.00171	-0.00057
<i>KM04_HOP_10</i>	-0.00209	-0.00082
<i>KM04_HOP_11</i>	-0.00206	-0.00118
<i>KM04_HOP_12</i>	-0.00159	-0.00056
<i>KM04_HOP_13</i>	-0.00339	-0.00115
<i>KM04_HOP_14</i>	-0.00269	0.0002
<i>KM04_HOP_15</i>	-0.00419	0.000508
<i>KM05_HOP_01</i>	-0.00275	-0.00044
<i>KM05_HOP_02</i>	-0.00098	-0.00052
<i>KM05_HOP_03</i>	-0.00208	0.000337
<i>KM05_HOP_04</i>	-0.00222	-0.00026
<i>KM05_HOP_05</i>	-0.00217	0.000202
<i>KM05_HOP_06</i>	-0.00205	-0.00066
<i>KM05_HOP_07</i>	-0.00291	-0.00068
<i>KM05_HOP_08</i>	-0.00305	-0.00019
<i>KM06_HOP_01</i>	-0.00113	0.000106
<i>KM06_HOP_02</i>	-0.00234	1E-05
<i>KM06_HOP_03</i>	-0.0006	-0.00054
<i>KM06_HOP_04</i>	-0.00241	0.000949
<i>KM06_HOP_05</i>	-0.00127	0.000437
<i>KM06_HOP_06</i>	-0.00136	-3.4E-05
<i>KM06_HOP_07</i>	-0.00134	0.000343

**Table S2 (cont.)**

<b>Trial</b>	<b>Knee XZ Min Torque (N.m)</b>	<b>Hip XZ Min Torque (N.m)</b>
<i>KM06_HOP_08</i>	-0.00143	9.05E-05
<i>KM06_HOP_09</i>	-0.00217	-0.00053
<i>KM06_HOP_10</i>	-0.00343	0.000271
<i>KM06_HOP_11</i>	-0.0013	0.000292
<i>KM06_HOP_12</i>	-0.00315	0.000178
<i>KM06_HOP_13</i>	-0.00212	0.000268
<i>KM06_HOP_14</i>	-0.00216	0.000199
<i>KM06_HOP_15</i>	-0.00165	0.00019

**Table S3.** ANCOVA testing for relationship between jump angle (continuous dependent variable) due to individual (nominal covariate) and the following continuous covariates: forces exerted (dorsoventral, anteroposterior, total [scaled to body weight]); kinematic performance metrics; 3D joint/body angles (range and maximum); maximum 3D external moment arms; maximum 3D external moments; and maximum and minimum XY and XZ moments. Interaction effects between individuals and continuous covariates also shown (significant results indicate differential response to continuous covariate as a function of individual). Bold entries indicate significant results.

<b>DV Force (N)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	1.80488	0.160972
DV Force	1	13356.8	13356.8	<b>251.384</b>	<b>2.46*10<sup>-19</sup></b>
Individual*DV Force	3	1547.19	515.73	<b>9.70638</b>	<b>0.00005</b>
Error	42	2231.59	53.1331		
Total	49	17423.3			

<b>AP Force (N)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.25904	0.854464
AP Force	1	484.968	484.968	1.30998	0.258878
Individual*AP Force	3	1101.86	367.287	0.992108	0.405822
Error	42	15548.8	370.209		
Total	49	17423.3			

<b>Total Force (x body weight)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	1.53137	0.220393
Total Force	1	13881.9	13881.9	<b>221.674</b>	<b>2.34*10<sup>-18</sup></b>
Individual*Tot. Force	3	623.544	207.848	<b>3.31904</b>	<b>0.0287781</b>
Error	42	2630.17	62.623		
Total	49	17423.3			

<b>Velocity (ms<sup>-1</sup>)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.843156	0.478002
Velocity	1	11829.5	11829.5	<b>104.007</b>	<b>6.22*10<sup>-13</sup></b>
Individual*Velocity	3	529.067	176.356	1.55054	0.2156
Error	42	4776.99	113.738		
Total	49	17423.3			

<b>Velocity (SVL)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.851031	0.473924
Velocity	1	11969.7	11969.7	<b>106.222</b>	<b>4.52*10<sup>-13</sup></b>
Individual*Velocity	3	433.132	144.377	1.28124	0.293219
Error	42	4732.79	112.685		
Total	49	17423.3			

<b>Acceleration (<math>ms^{-2}</math>)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.336934	0.798692
Acceleration	1	3450.38	3450.38	<b>12.1227</b>	<b>0.001176</b>
Individual*Acc.	3	1731.07	577.022	2.02733	0.124634
Error	42	11954.1	284.622		
Total	49	17423.3			

<b>Ankle Range (°)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.363183	0.779897
Ankle range	1	4651.27	4651.27	<b>17.615</b>	<b>0.000137</b>
Individual*Ankle rg.	3	1394.17	464.723	1.75997	0.169504
Error	42	11090.2	264.051		
Total	49	17423.3			

<b>Ankle Max (°)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.407099	0.748682
Ankle max	1	5902.35	5902.35	<b>25.056</b>	<b>0.000010</b>
Individual*Ankle mx.	3	1339.46	446.486	1.89537	0.145058
Error	42	9893.78	235.566		
Total	49	17423.3			

<b>Knee Range (°)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.631812	0.598606
Knee range	1	10110.9	10110.9	<b>66.6135</b>	<b>3.33*10<sup>-10</sup></b>
Individual*Knee rg.	3	649.813	216.604	1.42706	0.248339
Error	42	6374.92	151.784		
Total	49	17423.3			

<b>Knee Max (°)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.507499	0.679244
Knee max	1	8316.78	8316.78	<b>44.0126</b>	<b>4.86*10<sup>-8</sup></b>
Individual*Knee mx.	3	882.33	294.11	1.55644	0.214149
Error	42	7936.48	188.964		
Total	49	17423.3			

<b>Hip Range (°)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.353913	0.786527
Hip range	1	5618.62	5618.62	<b>20.7354</b>	<b>0.000045</b>
Individual*Hip rg.	3	136.334	45.4447	0.167713	0.917563
Error	42	11380.6	270.967		
Total	49	17423.3			

<b>Hip Max (°)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.274202	0.84366
Hip max	1	1856.73	1856.73	<b>5.30891</b>	<b>0.026232</b>
Individual*Hip mx.	3	589.881	196.627	0.562213	0.642935
Error	42	14689	349.738		
Total	49	17423.3			

<b>SI Range (°)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.35203	0.787874
SI range	1	3624.95	3624.95	<b>13.3066</b>	<b>0.000724</b>
Individual*SI rg.	3	2069.14	689.713	2.53183	0.069922
Error	42	11441.5	272.417		
Total	49	17423.3			

<b>SI Max (°)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.299536	0.825526
SI max	1	2802.64	2802.64	<b>8.75392</b>	<b>0.005057</b>
Individual*SI mx.	3	886.305	295.435	0.922778	0.438132
Error	42	13446.6	320.158		
Total	49	17423.3			

<b>Body Range (°)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.572218	0.63643
Body range	1	9763.16	9763.16	<b>58.2558</b>	<b>1.83*10<sup>-9</sup></b>
Individual*Body rg.	3	333.594	111.198	0.663507	0.579153
Error	42	7038.83	167.591		
Total	49	17423.3			

<b>Body Max (°)</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	1.74328	0.172789
SI max	1	14735	14735	<b>267.858</b>	<b>7.79*10<sup>-20</sup></b>
Individual*SI mx.	3	90.0996	30.0332	0.545953	0.653597
Error	42	2310.44	55.0106		
Total	49	17423.3			

<b>TMT Moment Arm</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.410203	0.746491
TMT MA	1	6668.57	6668.57	<b>28.5245</b>	<b>3.50*10<sup>-6</sup></b>
Individual*TMT MA	3	648.1	216.033	0.924073	0.437508
Error	42	9818.91	233.784		
Total	49	17423.3			



<b>Ankle Moment Arm</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.366075	0.777831
Ankle MA	1	5150.16	5150.16	<b>19.6507</b>	<b>0.000065</b>
Individual*Ank. MA	3	982.894	327.631	1.25067	0.303568
Error	42	11002.5	261.965		
Total	49	17423.3			

<b>Knee Moment Arm</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.338072	0.797875
Knee MA	1	3947.19	3947.19	<b>13.915</b>	<b>0.000567</b>
Individual*Knee MA	3	1274.53	424.843	1.4977	0.22906
Error	42	11913.9	283.664		
Total	49	17423.3			

<b>Hip Moment Arm</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.34083	0.79483
Hip MA	1	4366.88	4366.88	<b>15.6228</b>	<b>0.000291</b>
Individual*Hip MA	3	1028.85	342.949	1.22692	0.311845
Error	42	11739.9	279.52		
Total	49	17423.3			

<b>TMT 3D Torques</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.305253	0.821425
TMT 3D Torques	1	3406.46	3406.46	<b>10.843</b>	<b>0.002017</b>
Individual*TMT 3D	3	534.344	178.115	0.566952	0.639848
Error	42	13194.8	314.161		
Total	49	17423.3			

<b>Ankle 3D Torques</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.396802	0.755967
Ankle 3D Torques	1	5809.52	5809.52	<b>24.0381</b>	<b>0.000015</b>
Individual*Ankle 3D	3	1175.55	391.85	1.62137	0.198773
Error	42	10150.5	241.679		
Total	49	17423.3			

<b>Knee 3D Torques</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.318502	0.811917
Knee 3D Torques	1	4043.17	4043.17	<b>13.4283</b>	<b>0.000689</b>
Individual*Knee 3D	3	446.505	148.835	0.494316	0.688169
Error	42	12645.9	301.093		
Total	49	17423.3			

<b>Hip 3D Torques</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.487611	0.692732
Hip 3D Torques	1	6380.44	6380.44	<b>32.4422</b>	<b>1.09*10<sup>-6</sup></b>
Individual*Hip 3D	3	2494.99	831.662	<b>4.22871</b>	<b>0.010627</b>
Error	42	8260.16	196.671		
Total	49	17423.3			

<b>TMT XY Max</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.305253	0.821425
TMT XY Max	1	3406.46	3406.46	<b>10.843</b>	<b>0.002017</b>
Individual*TMT +XY	3	534.344	178.115	0.566952	0.639848
Error	42	13194.8	314.161		
Total	49	17423.3			

<b>Ankle XY Max</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.258043	0.855173
Ankle XY Max	1	458.15	458.15	1.23278	0.273183
Individual*Ank +XY	3	1068.57	356.191	0.958432	0.421241
Error	42	15608.9	371.64		
Total	49	17423.3			

<b>Knee XY Max</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.258043	0.855173
Knee XY Max	1	1798.76	1798.76	<b>5.54583</b>	<b>0.023273</b>
Individual*Knee +XY	3	1714.37	571.455	1.76188	0.169133
Error	42	13622.5	324.344		
Total	49	17423.3			

<b>Hip XY Max</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.260115	0.8537
Hip XY Max	1	293.119	293.119	0.795051	0.377657
Individual*Hip +XY	3	1357.95	452.649	1.22776	0.311549
Error	42	15484.5	368.679		
Total	49	17423.3			

<b>TMT XY Min</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.241881	0.866619
TMT XY Min	1	61.3934	61.3934	0.15485	0.695934
Individual*TMT -XY	3	422.408	140.803	0.35514	0.785648
Error	42	16651.8	396.471		
Total	49	17423.3			

<b>Ankle XY Min</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.315427	0.814124
Ankle XY Min	1	4195.55	4195.55	<b>13.7998</b>	<b>0.000594</b>
Individual*Ankle -XY	3	170.836	56.9454	0.187303	0.904451
Error	42	12769.2	304.029		
Total	49	17423.3			

<b>Knee XY Min</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.289779	0.832519
Knee XY Min	1	1649.9	1649.9	<b>4.98554</b>	<b>0.030947</b>
Individual*Knee -XY	3	1586.31	528.77	1.5978	0.204225
Error	42	13899.4	330.937		
Total	49	17423.3			

<b>Hip XY Min</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.56263	0.642663
Hip XY Min	1	8317.61	8317.61	<b>48.7987</b>	<b>1.52*10<sup>-8</sup></b>
Individual*Hip -XY	3	1659.19	553.063	<b>3.24478</b>	<b>0.031263</b>
Error	42	7158.79	170.447		
Total	49	17423.3			

<b>TMT XZ Max</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.272762	0.844688
TMT XZ Max	1	241.851	241.851	0.68789	0.411572
Individual*TMT +XZ	3	2127.21	709.07	2.01679	0.126153
Error	42	14766.5	351.584		
Total	49	17423.3			

	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
<b>Ankle XZ Max</b>					
Individual	3	287.696	95.8988	0.434353	0.729527
Ankle XZ Max	1	7366.48	7366.48	<b>33.3649</b>	<b>8.33*10<sup>-7</sup></b>
Individual*Ankle +XZ	3	496.114	165.371	0.749013	0.529062
Error	42	9272.99	220.786		
Total	49	17423.3			

	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
<b>Knee XZ Max</b>					
Individual	3	287.696	95.8988	0.337399	0.798358
Knee XZ Max	1	1897.94	1897.94	<b>6.67748</b>	<b>0.013332</b>
Individual*Knee +XZ	3	3300.01	1100	<b>3.87012</b>	<b>0.015673</b>
Error	42	11937.6	284.23		
Total	49	17423.3			

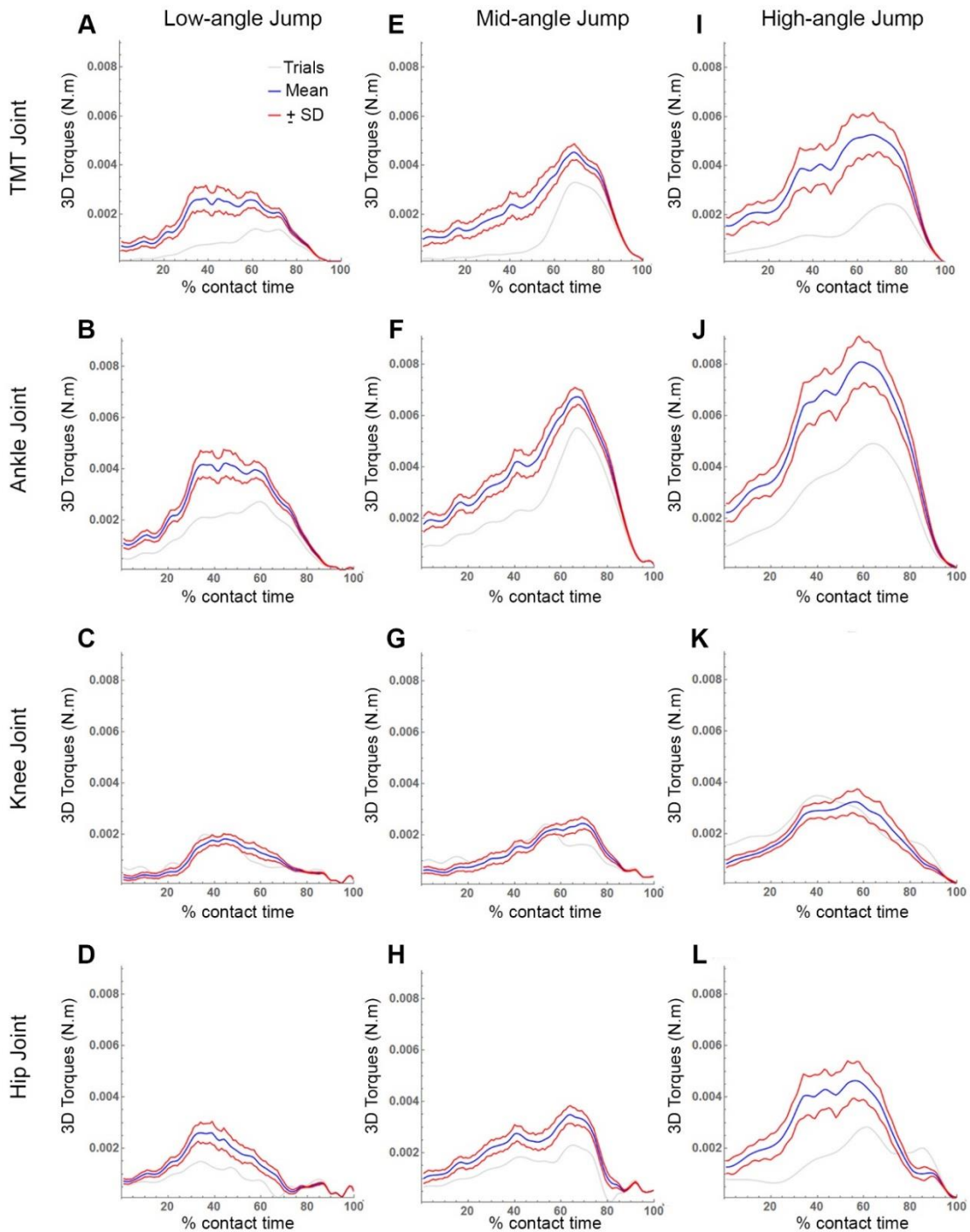
<b>Hip XZ Max</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.326399	0.80625
Hip XZ Max	1	834.745	834.745	2.84112	0.099297
Individual*Hip +XZ	3	3960.88	1320.29	<b>4.49372</b>	<b>0.008002</b>
Error	42	12340	293.809		
Total	49	17423.3			

<b>TMT XZ Min</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.2505	0.860525
TMT XZ Min	1	416.554	416.554	1.08809	0.302862
Individual*TMT -XZ	3	640.169	213.39	0.557401	0.646079
Error	42	16078.9	382.83		
Total	49	17423.3			

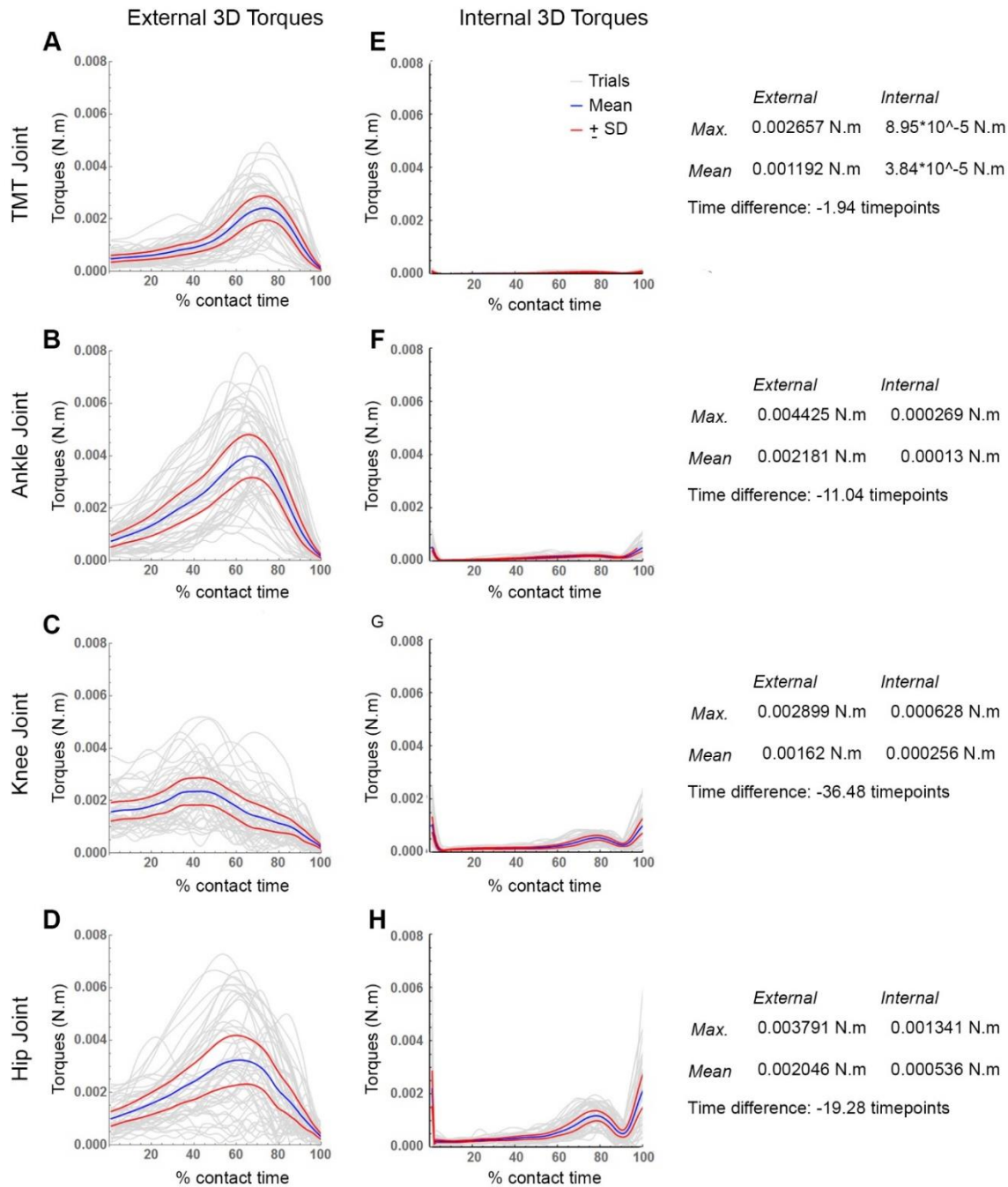
<b>Ankle XZ Min</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.317901	0.812349
Ankle XZ Min	1	3430.62	3430.62	<b>11.3724</b>	<b>0.001611</b>
Individual*Ankle -XZ	3	1035.14	345.048	1.14382	0.342512
Error	42	12669.8	301.662		
Total	49	17423.3			

<b>Knee XZ Min</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.284527	0.836279
Knee XZ Min	1	2087.35	2087.35	<b>6.19306</b>	<b>0.016875</b>
Individual*Knee -XZ	3	892.288	297.429	0.882458	0.457947
Error	42	14155.9	337.046		
Total	49	17423.3			

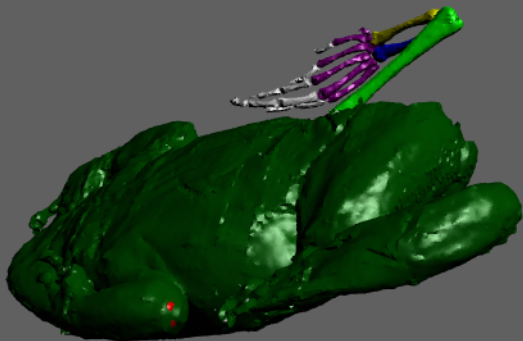
<b>Hip XZ Min</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P (sig)</b>
Individual	3	287.696	95.8988	0.300264	0.825004
Hip XZ Min	1	2419.06	2419.06	<b>7.57421</b>	<b>0.008705</b>
Individual*Hip -XZ	3	1302.5	434.167	1.3594	0.268274
Error	42	13414	319.382		
Total	49	17423.3			



**Fig. S1.** Sensitivity analysis of the impact of center of pressure (COP) location on three-dimensional external torques at the TMT (A, E, I), ankle (B, F, J), knee (C, G, K) and hip (D, H, L) joints during low-angle (A-D, KM04 HOP 12), intermediate (E-H, KM04 HOP 09) and high-angle (I-L, KM04 HOP 14) jumps. Data are normalized and resampled to 100 time points and are shown to the same scale. Gray trace is data from the original trial (using estimated COP as described in the text). Blue trace is the mean of 100 iterations using alternate COP locations and red traces are the standard deviations.



**Fig. S2.** Comparison of 3D external (A-D) and internal (E-H) joint torques at the TMT (A, E), ankle (B, F), knee (C, G) and hip (D, H) joints for all trials. Internal torques for foot segment are negligible and not shown. Data are normalized and resampled to 100 time points and are shown to the same scale. Gray traces are data from the individual trials; blue trace is the mean and red traces are the standard deviations. Right column shows average (for all trials) peak and mean external and internal torque magnitudes, and time difference between peak values (external – internal; thus, negative values indicate external torques peaked earlier). Artefactual high internal torques during the first and last few frames should be ignored.



**Fig. S3.** Three-dimensional PDF of skeleton and body/limb segments of CT scans of *Kassina maculata* used to calculate segment properties. To manipulate, first download and activate the 3D PDF (by clicking on it). Left click and drag to rotate, right click and drag to zoom in and out, click both buttons and drag to pan. Open model tree on the upper toolbar to show or hide individual model parts.