

Calibration 8

Methods

- Changes compared to calibration 7:
 - PS bounds for PCL <1 and larger ranges of the Young's modulus to see if we can get the points of rotation more in the middle instead of anteriorly
 - Prestretch ranges:
 - ACL, MCL, LCL = 0.7 – 1.2
 - PCL = 0.7 – 1.0
 - The weight of AP increased to 2 compared to weight 1 for IE and VV.
 - Stiffness ranges higher to see if that increases optimization quality.
 - YM ranges:

Table 1: Young's modulus values to be used in the calibration, the start values are indicated in bold.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
ACL	13	23	33	43	53	63	73	83	93	103	113	123	133	143	153	163	173	183	193	203	213	223
PCL	8	18	28	38	48	58	68	78	88	98	108	118	128	138	148	158	168	178	188	198	208	218
MCL	114	124	134	144	154	164	174	184	194	204	214	224	234	244	254	264	274	284	294	304	314	324
LCL	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380

- Start values:
 - 1: ACL 0.9 rest 1
 - 2: PCL 0.9 rest 1
 - 3: MCL 1.1 rest 1
 - 4: LCL 0.9 rest 1
 - 5: All 1

All same Young's modulus start values (as indicated in bold in Table 1)

The Python scripts used for calibration can be found in folder: *Python scripts - Calibration 8

Results

The calibration results can be found in: Results calibration 8.xlsx

Some results are better than in calibration 7 but a lot of them are worse. Maybe the weight of AP was not high enough compared to VV and IE (since the normalized value of AP is smaller than IE and VV). Therefore, it might be worth to try to increase the weight factor to 5 for AP, 1 for IE and 1 for VV.