

Calibration 3

Methods

- Changes compared to calibration 2:
 - Also optimize the stiffness of the ligaments (Young's modulus)
- Prestretch and Young's modulus values:
 - Prestretch 0.85 – 1.05
 - Young's modulus + and – 50 N from the literature value
 - Young's modulus → Objective function can choose out of 10 values around the literature value per ligament.

The Python scripts used for calibration can be found in folder: *Python scripts - Calibration 3

Results

The calibration results can be found in: Results calibration 3.xlsx

The errors seemed to be slightly lower compared to previous calibrations.

Model oks007 still showed difficulties though, it was running very slowly.

We found that models du02, oks004 and oks007 had max_ups set to 10 where in the other models max_ups was set to 0. When max_ups is set to 0, FEBio will use the Full-Newton method. For these models, this has to be adjusted in the next calibration round

We found that model oks006 had a meniscus spring which was located wrong.