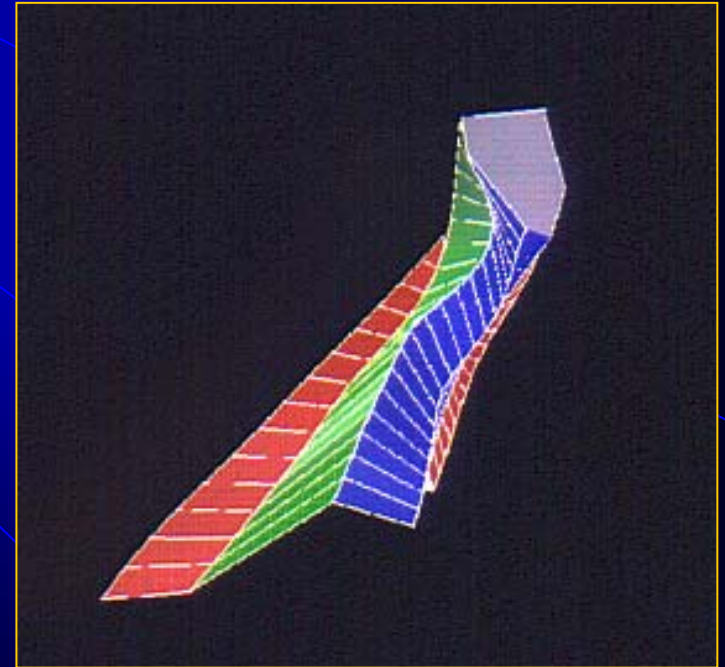
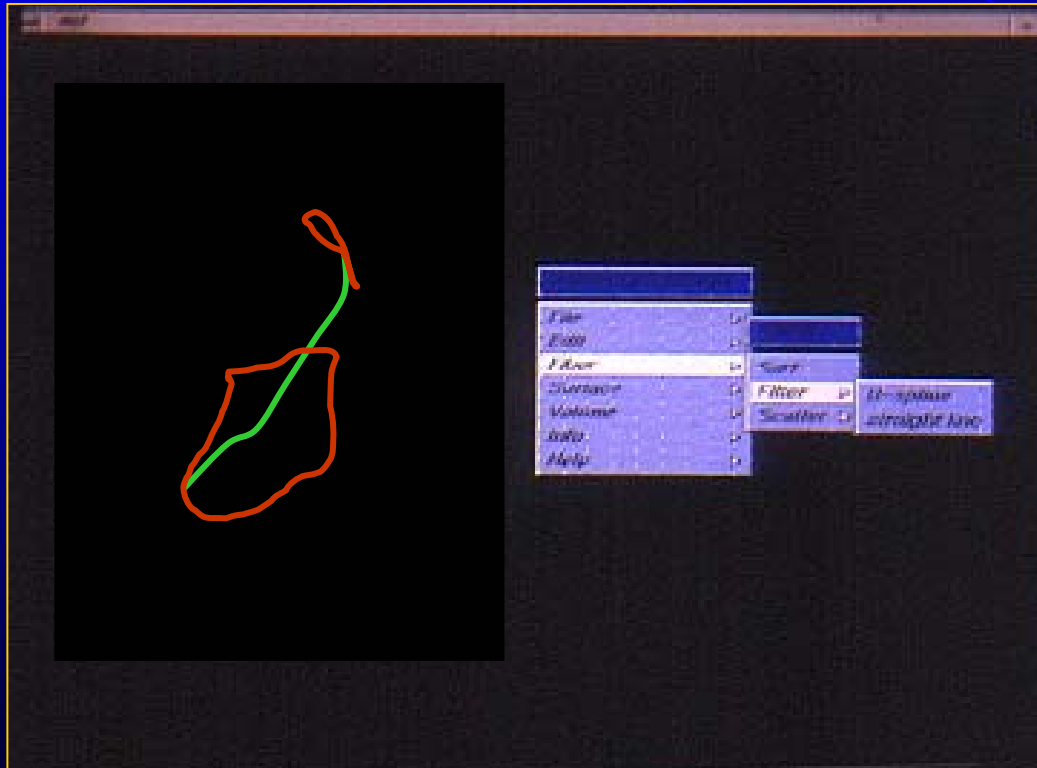


EXAMPLES OF COMPUTER KINEMATIC OR ANATOMICAL EVALUATION

- ↓ **Validation of ACL model**
- ↓ **Validation of total knee
kinematic model**

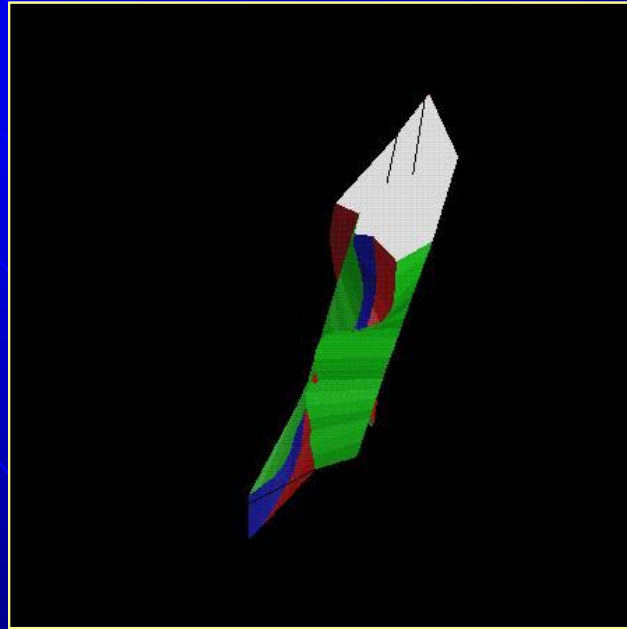
Applications

Acquisition of original ACL fibers and insertions area to build an ACL model



Applications

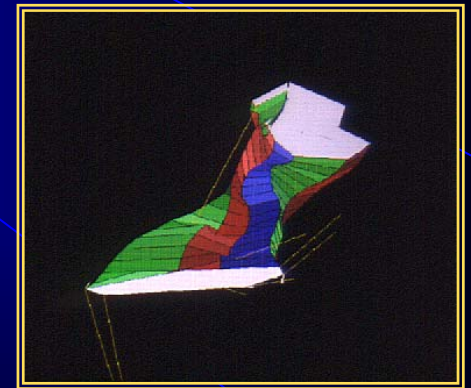
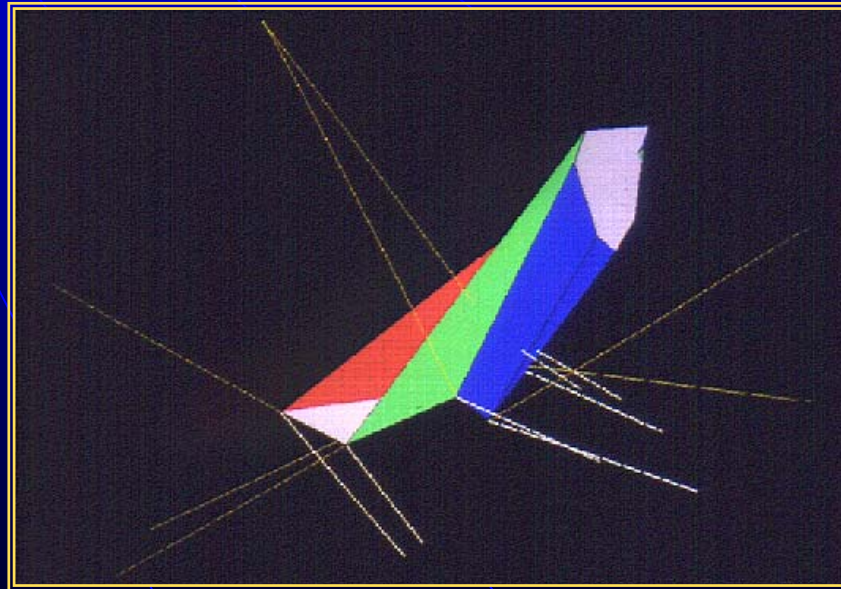
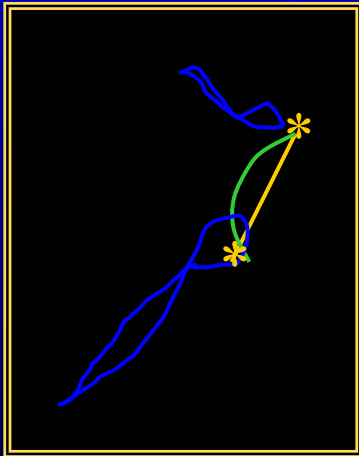
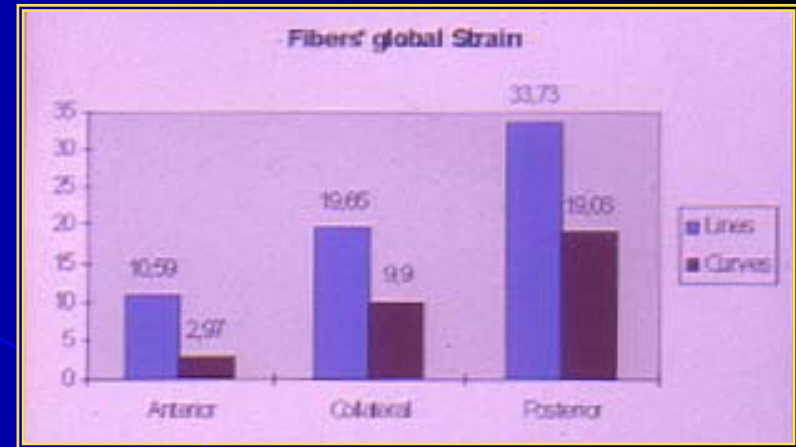
KINEMATIC SIMULATION



Martelli S. et al. -Fiber-based Anterior Cruciate Ligament Model for Biomechanical Simulations- *Journal of Orthopaedic Research*, 16(3), 379-385, 1998.

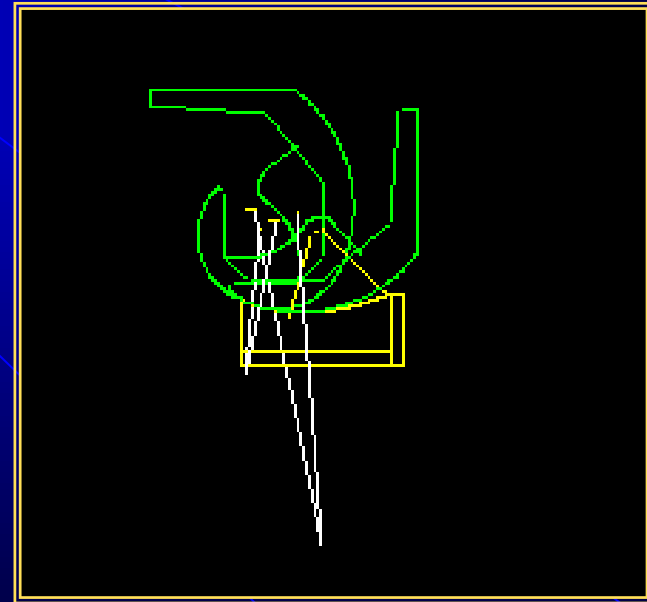
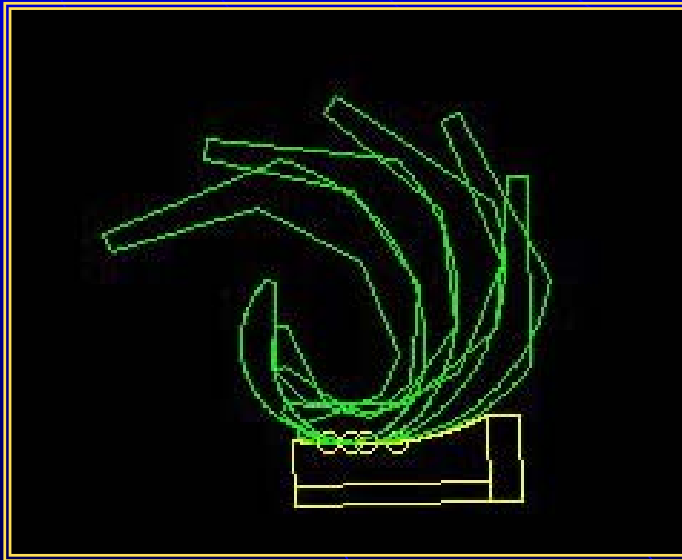
Applications

Prediction of elongation and force on real ACL fibers



Applications

Prediction of total knee prosthesis behaviour by means of knee model that minimize global energy

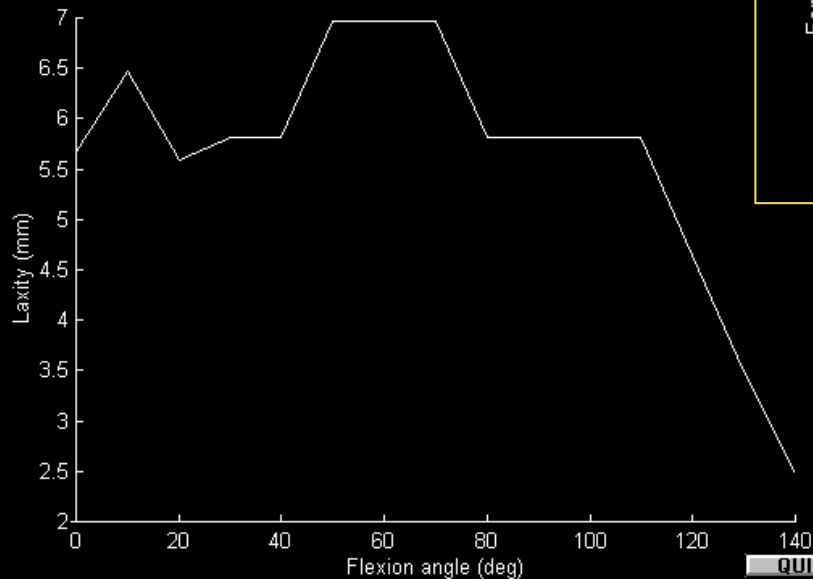
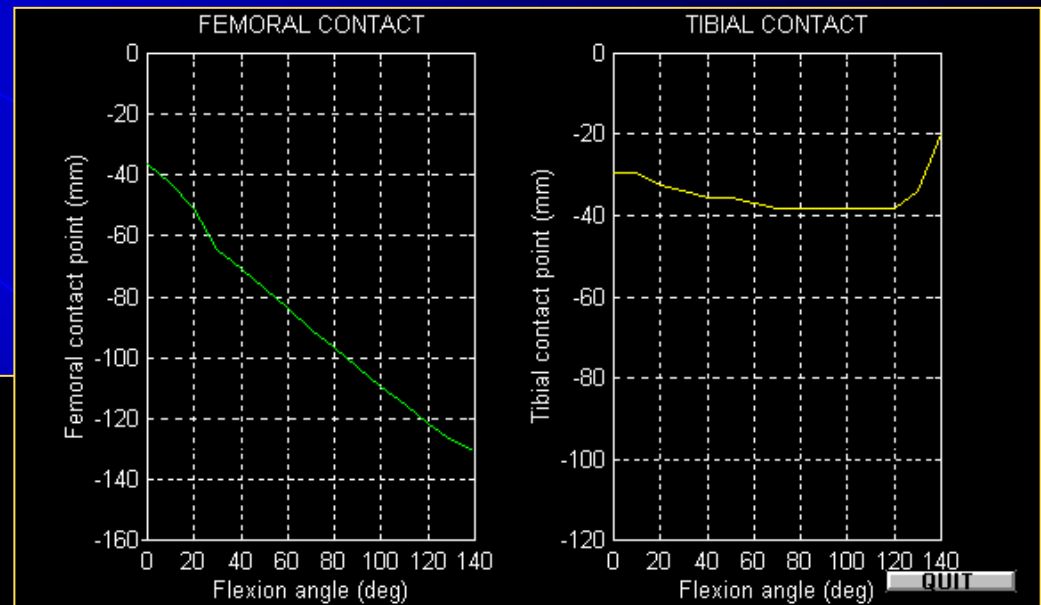


Martelli S., Ellis R., Marcacci M., Zaffagnini S. - *Journal of arthroplasty* 13 145-155 1998

Applications

Kinematic simulation predict

CONTACT POINTS



LAXITY

Applications

Kinematic simulation predict

LIGAMENT ELONGATION (%)

ROLLING, SLIDING

