**viscoelastic modeling of porcine ligaments**

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**Abstract.** Viscoelastic quasi-linear analytical models, as Fung, was implemented through the utilization of experimental results obtained from several porcine ligaments as: lateral collateral ligament (LCL), anterior cruciate ligament (ACL), posterior cruciate ligament (PCL) and medial collateral ligament (MCL). To implement quasi-linear viscoelastic models for soft tissues, as the Fung one, it was necessary the utilization of a programming language, as C Sharp, to deal with the models mathematical demands, as the convolution calculations. The models results shows the stress evolution in relaxation tests. The preliminary results show a good correlation between experimental and analytical models, showing a noticiable change in ligaments stiffness after the experimental implementation of relaxation tests.

**Keywords:** knee ligaments, analytic model, viscoelasticity, Fung