
General Status from FLEX Pli GTR Model Consortium

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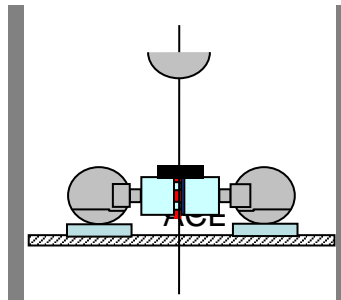
FLEX PLI GTR Model validation matrix

Material Validation

- Nylon Compression Static
- Nylon Tensile 4 rates
- Nylon Stress Relaxation Static
- Rubber Tensile 4 rates
- Rubber Compression Static
- Rubber Compression 4 rates
- Neoprene Tensile Static
- Neoprene Compress 4 rates
- Bone Tensile longitudinal Static
- Bone Compression Static
- Bone Bending 4 rates
- Spring I Compression Static
- Spring II Compression Static
- Cable thick Tensile Static
- Cable thin Tensile Static

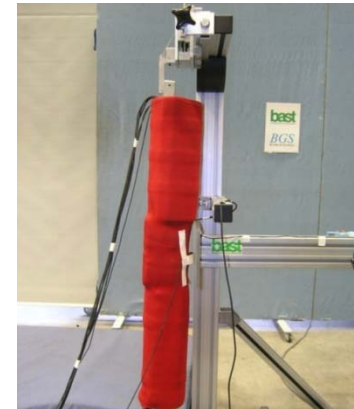
Component Validation

- Tibia
- Tibia reduced speed
- Knee
- Knee reduced speed
- Rubber + Neoprene layers



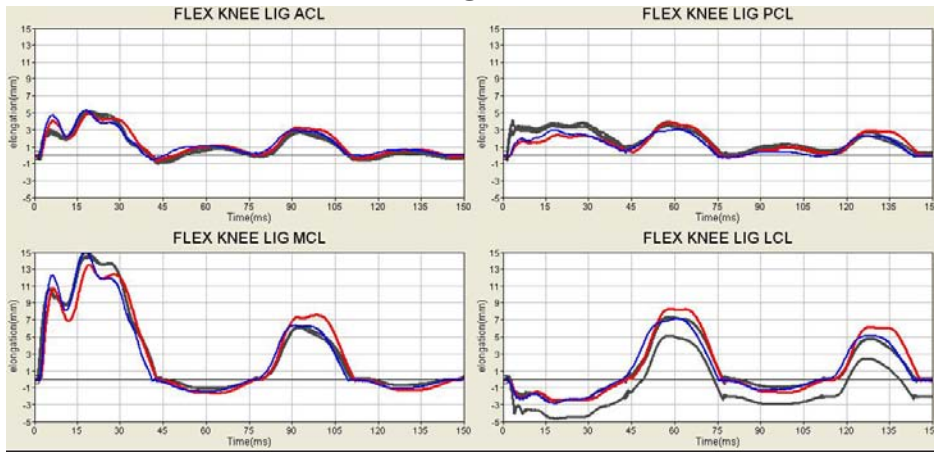
Full Leg Validation

- Pendulum – No skin
- Inverse tibia
- Inverse tibia downward
- Inverse tibia oblique
- Inverse tibia reduced speed
- Inverse tibia increased speed
- Inverse knee
- Inverse knee oblique
- Inverse knee reduced speed
- Inverse femur
- Inverse femur oblique
- Inverse femur reduced speed



Validation results (development version)

Elongations

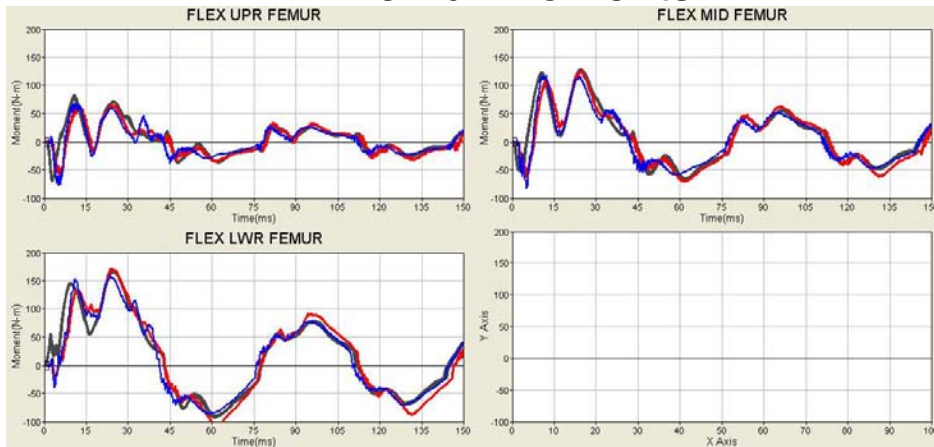


Experiment
Simulation
Simulation
(parameter variation)

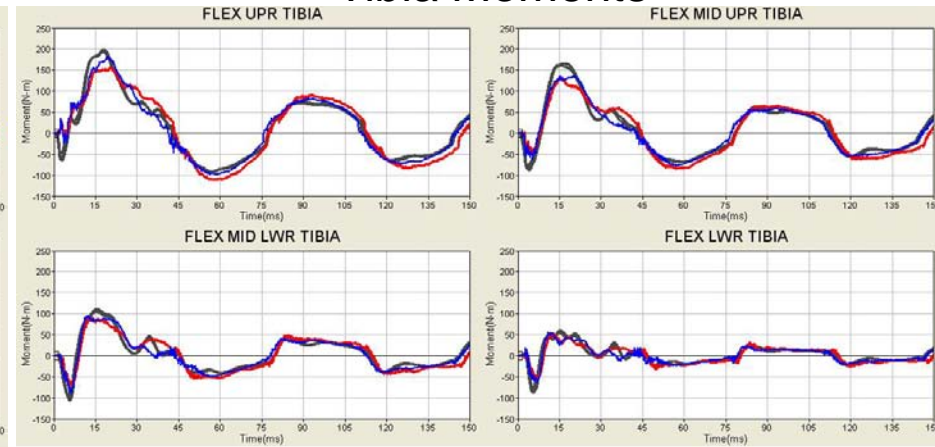
Inverse - knee



Femur Moments



Tibia Moments



FLEX PLI GTR Model development

- Early stage generic models (4 codes) have been released mid 2009,
Pamcrash, LS-Dyna, Abaqus and Radioss
- Well-validated models are targeted for release within the next couple of months

Thank You