Minisymposium proposal

Title:

Computational Modelling of Locomotor Systems

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Abstract:

The aim of this minisymposium is to highlight the increasing role of computation in the modelling of locomotor systems. It is well-known that today's computational tools are indispensable to augment experimental techniques for a deeper understanding of soft tissues like skeletal muscles and biological multibody systems. Computational biomechanics may increase success rates of clinical interventions and therapeutic effectiveness which is also of great socio-economical interest.

Active soft biological tissues are characterised by a huge spectrum of very complex properties such as anisotropy, damage, growth and their ability to undergo large deformations. Many of these aspects are not captured sufficiently in material models and computational methods. Very important is further the integration of these tools into locomotor systems. To advance the aforementioned it is necessary to bring together in this minisymposium scientists and bioengineers in the areas of computational mechanics and especially experimental techniques and experimental procedures.