Special Issue

Numerical Modelling and Simulation Applied to Head Trauma

Message from the Guest Editors

Traumatic brain injury is one of the main causes of death and disability. Road traffic accidents, sports, assaults, and accidents at work and recreational activities are the major sources. In order to better understand the mechanisms of TBI, numerical models of the human head have been developed. Since the late 1970s, FE head models have been evolving from simple-unrealistic geometries to models with detailed geometric descriptions of anatomical features, with complex constitutive modelling and numerical formulations being used. Complex and accurate modelling of the human head is possible because of today's numerical methods efficiency and increasing CPU power. The aim of this Special Issue is to collect papers that present new contributions to the state of the art of numerical head models. This Special Issue is not limited to head models; contributions with head–neck systems are welcome. We strongly encourage accurate geometrical and material modelling, with proper contact definitions and finite element formulations ...

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