Computational and Mathematical Methods in Medicine

Special Issue on

Computational Modeling of the Trauma Injury

CALL FOR PAPERS

Traumatic biomechanics of the human body under various loading conditions, such as car crash, falling, contact sports, and military environments, has been studied for decades. The goal of research in this area is to advance knowledge pertaining to human injury causation and develop affordable and effective countermeasures for protections towards injury and fatality reduction. From an ethical point of view, it is extremely difficult to propose a well-controlled human subject study aiming at understanding the injury mechanisms and establishing the associated tolerance values. For this reason, many numerical simulation techniques, such as finite element, boundary element, and meshless methods, have been used to study the human body response in an attempt to obtain in-depth insights into injury biomechanics, thus minimizing the need for human subject research. This call for papers is to invite investigators/researchers to contribute their original research articles as well as review articles that will stimulate and support the continuing efforts in pursuit of using advanced numerical tools in study of the human body responses and development of injury prevention measures.

Potential topics include, but are not limited to:

- Computational modeling of traumatic biomechanics, sports biomechanics, and blast biomechanics
- Numerical simulation of car crash
- Accident reconstruction
- Development of numerical dummies/surrogates
- Characterization and modeling of tissue behavior under dynamic loading
- New concepts for reduction injuries and fatality
- Computational optimization

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/cmmm/cmhr/.

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