

## **HIGH PERFORMANCE COMPUTATIONAL BIOMECHANICS**

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### **PROPOSAL**

**Key Words:** *Biomechanics, Parallelization*

This MS is focused on High Performance Computing when applied to Biomechanics to solve those complex problems where the efficient use of large computational resources is a must. Such kind of problems can be found in almost every Biomechanical sub-field, such as Fluid or Solid Mechanics, Electrophysiology or Multiscales. Unlike other domains of Science and Technology, HPC in Biomechanics (HPCBM) is still in its infancy.

For that reason, contributions presenting HPCBM applications are welcome. For instance: solution algorithms and their efficient implementation in parallel platforms, geometrically complex problems with large meshes and/or highly transient dynamic behavior, multiscale simulation of tissue and organs, multiphysics coupling such as electromechanics or fluid-structure interaction, complex data assimilation, massive image processing and data treatment, etc. This MS should attract researchers from many sub-fields of Biomechanics interested in a common issue: how to solve large problems in large computers with great efficiency.