

## COUPLED PROBLEMS IN HARD TISSUE BIOMECHANICS

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### ABSTRACT

The increasing amount of digital personalized data, particularly CT visualization, holds great promises when combined with computational hard-tissue biomechanics for diagnosis and treatment at the patient level. Computational mechanics (CM) combined with Phase Field Model (PFM) for example, for failure initiation based on the available digital data allows for providing patient-specific information which may be directly translated to clinical applications. This information, when fused with artificial intelligence has the potential to be used very successfully in clinical practice.

This mini-symposium is devoted to recent developments in CM of hard tissues when applied in clinical practice, with a focus on human bones. Presentations that combine CM methods based on CT with artificial intelligence algorithms are encouraged.

Also, personalized treatment strategies that are guided by clinical needs and implemented into clinical practice are of particular interest.