S02 Biomechanics and biomaterials

Organizers:

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Scope of the session:

- General biomechanics (the determination of external forces and internal forces acting on the biological systems, e.g. on the human body) and the effects that these forces cause.
- Medical biomechanics, based on the use of results of general biomechanics research in the prevention, diagnosis, treatment and rehabilitation of organs.
- Biomechanical engineering, which applies the principles of general biomechanics for the analysis and design of technical devices.
- Biomechanics of work, the subject of which is the consideration of the causes and effects of workloads resulting from physical work for the human musculoskeletal system.
- Bio-heat transfer. Modeling of thermal processes proceeding in the domain of biological tissue. Interactions between skin tissue and the external heat sources.
- Growth and evolution modeling of the living tissues. Bone remodeling.