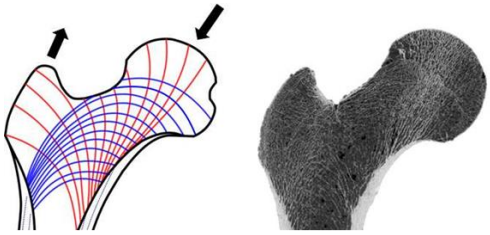
INTRODUCTION TO BIOMECHANICS

Wintersemester 2023/24

- Content
  - Introduction to the Biomechanics of the Human Movement
    - Human body kinematics
    - Human body kinetics
    - Analysis of human movement (Gait analysis)
  - Mechanics of Biological Tissues
    - Structure and function of biological tissues
    - Mechanical properties of biological tissues
    - Mechanical testing of biological tissues
    - Modelling and simulation of biological tissues
  - Introduction to the state of the art topics
    - Tissue Engineering
    - Cell mechanics
  - Introduction to the Biomechanics of Knee, Hip and Spine Joints
    - Structure and function of these joints
    - Mechanical behavior of these joints
    - Design and simulation of prostheses for these joints
  - Advanced biomechanics
    - Biomaterials
    - Tissue Engineering
    - Cell mechanics



- Requirements for participation and examination
  - Successful completion of courses in engineering mechanics and materials science
- Module Components
  - Lecture (Prof. Checa): Fri., 10 – 12:00, BH-N 243 start: 20.10.23
  - Seminar (Dr. Mohammadkhah): Wed., 10 – 12:00, E-N 181 start: 25.10.23
- Contact Person:
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