



LAB PRESENTATION Title Computational Mechanics and Experimental Biomechanics Lab



המעבדה למכניקה חישובית Computational Mechanics & **Experimental Biomechanics Lab** וביומכניקה ניסויית

Main researcher: Prof. Zohar Yosibash – Head of CM&EB Lab







LAB PRESENTATION *Title Computational Mechanics and Experimental Biomechanics Lab* computational Mechanics & המעבדה למכניקה חישובית Experimental Biomechanics Lab

- List of Experimental possible activities in lab
 - Instron 60TM-30 (30kN, 100Nm) Tension/Torsion, Compression/Torsion Machine
 - Digital Image Correlation System with 4 cameras and VIC-3D system by CSI
 - Jigs for tensile/shear/3PB/Composite buckling experiments
 - -80C freezer by Sanyo
- List of Simulation/Computers possible activities in lab
 - Abaqus/Nastran/StressCheck/Simfini FE software products
 - Series of work-stations





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Description: Investigating of mechanical properties of metallic, coposites, 3D-printed structures, and biological tissues as bones and arteries under simple and complex loading combined conditions (as torsion+compression). Investigating implants inserted in bone from the mechanical point of view.

Scope & Market: Medical device companies, 3D-printing companies as Stratasys, aerospace industry, FABs.

Innovation & Benefit: Combination of inovative numerical methods with an advanced experimental setting allows to explore the mechanical response of advanced materials and especially hard human tissues, allowing better designs and improving medical treatment. These capabilities also allow to validate new failure laws for structures under a complex loading condition.