



BME PARIS
BioMedical Engineering
MASTER'S PROGRAM

NONLINEAR OPTICS AND MICROMECHANICS

Open Your Mind Seminar

Friday, Oct 2 2020
1.30 pm – 3 pm

Arts et Métiers
155 Boulevard de l'Hôpital
75013 Paris
BEZIER amphitheater

Intervertebral disc: a microstructural and micromechanical comparison

Micromechanics applied to biological tissues combines two technical challenges: applying loads or deformation to a small and often slippery sample in a controlled and reproducible way, and observing the microscopic changes occurring in the tissue. In this seminar we will briefly look at second harmonic generation and two-photon fluorescence, two non-linear microscopy methods which allow discriminating the tissue basic components without tissue staining. We will also look at the experimental methods to study the microscopic mechanical behaviour of biological tissues, and in particular the intervertebral disc: the largest avascular organ of the human body, with incredible mechanical properties that allow the spine to be flexible and shock-resistant.

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