

Lundi 9 octobre 2023 à 14h00
Amphithéâtre Henri Benoît et visio

Charles Dhong

Dept. of Materials Science & Engineering, Dept. of Biomed. Engineering,
University of Delaware

Mechanical Interfaces in Biology: From Cells to the Human Sense of Touch

Mechanical properties and forces play important roles in biology. On the scale of cells, the mechanical stiffness of cells and tissue can indicate diseases like fibrosis or elucidate pathways. On the scale of the human body, mechanical forces generated by friction form the tactile stimuli used to perceive touch. Common soft matter challenges to both systems are that biological interfaces of interest are often buried in hard-to-access interfaces, especially in situ, and in both systems, objects are soft and heterogenous. Here, I will discuss our work on how we leverage soft matter phenomenon, from friction instabilities to elasto-hydrodynamics, to understand these biological interfaces and explain their healthcare implications in fibrosis, osteoarthritis, and tactile aids for people with blindness.

