a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

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MECH 493 project: Viscoelastic characterization of hydrogels

Background and research goal

This project investigates methodologies for the experimental characterization of the viscoelastic behavior of hydrogels via compression tests. The project will involve comparing experimental measurements (from literature) on compression tests on hydrogels against theoretical models to extract important physical properties.

Tasks to be performed by the student

The student is expected to perform theoretical simulations to support previous experimental observations and to refine currently existing theoretical models to better match experiments and unravel new physical phenomena at the microscopic scale.

Facilities and team:

The student will be using a computer to run Abaqus and Comsol simulations and work from home. The student will also interact with one or more graduate students to formulate the theoretical models.