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Type: **Invited Speaker / Conférencier(ère) invité(e)**

(I) How can we define and control the material properties of developing tissues?

Tuesday 20 June 2023 16:45 (30 minutes)

Tissue material properties can change drastically during embryonic development, reminiscent of rigidity transitions in physics. However, measuring the transitions or learning how to control the transitions is challenging experimentally. Theoretical and computational models provide new powerful tools to offer hypotheses on how to control the transitions. In this talk, I will introduce background on a commonly used tissue model, vertex models. I will highlight recent studies on the role of collective tissue mechanics in development and disease. I will then present our research on developing computational models to study the tissue material properties and their impact on cellular functions and coordination thereof.

Keyword-1

Phase Transitions of Tissues

Keyword-2

Rheology of vertex models

Keyword-3

Author: Dr ERDEMCI-TANOGAN, Gonca (Western University)

Presenter: Dr ERDEMCI-TANOGAN, Gonca (Western University)

Session Classification: (DTP) T4-4 Hot Topics From Theory Made Accessible | Sujets chauds de la théorie rendus accessibles (DPT)

Track Classification: Symposia Day (Tues. June 20) / Journée de symposiums (mardi, le 20 juin): Symposia Day (DTP - DPT) - Hot Topics From Theory Made Accessible | Les sujets chauds de la théorie rendus accessibles