



Canadian Association  
of Physicists

Association canadienne  
des physiciens et physiciennes

Contribution ID: 3626

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

## **(I) Embryonic tissues as active matter: modelling developmental processes**

*Tuesday 20 June 2023 13:45 (30 minutes)*

The material state of embryonic tissues emerges from the collective interactions of cells. Most tissues are soft active materials that can flow or deform. This deformability is shown to be important for proper embryonic development. However, cell and tissue mechanics are experimentally difficult to probe in developing animals. Here, I will discuss our research developing computational and theoretical models to investigate how tissue material properties affect cellular functions and coordination. I will present verifiable mathematical models and predictions that we developed for various developmental processes.

### **Keyword-2**

Cell and Tissue Mechanics

### **Keyword-1**

Collective Cell Behavior

### **Keyword-3**

**Primary author:** Dr ERDEMCI-TANOGAN, Gonca (Western University)

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

**Session Classification:** (DPMB/DCMMP) T3-1 Soft Matter and Biological Physics Symposium | Symposium sur la matière molle et la physique biologique (DPMB/DPMCM)

**Track Classification:** Symposia Day (Tues. June 20) / Journée de symposiums (mardi, le 20 juin): Symposia Day (DPMB/DCMMP - DPMB/DPMCM) - Soft Matter and Biological and Physics | Matière molle et physique biologique