



**Thursday, February 12, 2009
3:00–3:50 p.m.
Harrelson 330**

The Mechanics of Tissue Dynamics

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Tissues grow, change shape, and differentiate, function normally or abnormally, get diseased or injured, repair themselves, and sometimes atrophy. This complex suite of behaviors is governed by a complex suite of controls. Nonetheless, we can identify some general principles at work in the dynamics of tissues. Our goal is to understand how a tissue's mechanics and biology regulate each other.

Our models use biologically-based continuum mechanics to track the component cells, fluids, signaling molecules, and extracellular matrix materials. The presentation will describe our modeling approach, reveal some of the general principles we have identified, and discuss some of the questions our findings have raised about specific developmental systems.

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