

## Cell migration and morphogenesis in viscoelastic matrices Presented by Ovijit Chaudhuri, PhD Associate Professor, Mechanical Engineering and by

Associate Professor, Mechanical Engineering and by courtesy, Bioengineering Stanford University

The extracellular matrix (ECM) is a complex assembly of structural proteins that provides physical support and biochemical signaling to cells in tissues. Over the last two decades, studies have revealed the important role that ECM elasticity plays in regulating a variety of biological processes in cells, including stem cell differentiation and cancer progression. However, tissues and ECM are often viscoelastic, displaying stress relaxation over time in response to a deformation, and viscoplastic, exhibiting, irreversible deformations in response to mechanical stress.

In this talk, Dr. Chaudhuri will discuss recent findings on how matrix viscoelasticity regulates various biological processes, including collective invasion by cancer cells, morphogenesis of pluripotent stem cells and monocyte migration

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