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The impact of a heterogeneous environment on invasive processes

The invasion or migration of cells in tissues, either during embryonic development, normal physiological processes such as tissue repair or as a result of pathologies such as cancer, can be highly variable according to cellular and tissue type. In this talk I will present a variety of results, based on both individual and continuous level models, that examine the impact of the extracellular matrix environment on invasion. Specifically, I will examine the impact of both a heterogeneous adhesive environment surrounding cells and varying degrees of anisotropy resulting from the oriented structure of matrix fibres.