

Modelling cell migration to understand cancer invasion

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The talk will focus on modelling cell migration in confined environments and in particular on how to describe the presence of thin structures such as base membranes, cell lining and vessel walls. The method to identify the proper interface conditions is discussed for a cell population also in the case in which it is characterized by heterogeneous phenotypic characteristics regarding cell motility. In this latter case, the way in which the interface conditions depend on the phenotype is found, determining the ability to cross the thin structure. In this way the membrane can act as a selector of more invasive phenotypes with respect to more residential phenotypes.