

Title: Modelling tumour and spread

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Abstract:

The lectures will focus on the presentation of several modelling techniques and frameworks used to describe phenomena related to the growth of tumours and tissues.

They will focus on

- Basic phenomenology of growth and early models of avascular growth
- Multiphase models of avascular growth and contact inhibition
- Modelling tissue remodelling and reorganization
- Modelling angiogenesis
- Modelling cell migration and metastasis
- Individual based models
- Open problems. Multi-scale issues and mechano-transduction