

# Soft.Matter@PT 2015

## Filipa Alves

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**Expertise:** Mathematical modeling in biophysics and developmental biology

	Colloids	Liquid Crystals	Polymers and Gels	Interfaces, surfactants	Foams, emulsions	Granular materials	Biological	Other (specify)
Experimental							✓	
Computacional							✓	
Theoretical							✓	

### Description of expertise:

- Theoretical biophysics and developmental biology
- Computational models of biological pattern formation, genetic regulatory networks and metabolic regulation
- Quantitative image analysis

### Selected Publications (max 5):

- Michard E, Alves F & Feijó JA. The role of ion fluxes in polarized cell growth and morphogenesis: the pollen tube as an experimental paradigm *Int J Dev Biol* 53 : 1609-1622
- Alves F & Dilão R. Modeling segmental patterning in *Drosophila*: maternal and gap genes, *J. Theor. Biol.* 241(2) : 342-359
- Alves F & Dilão R. A software tool to model genetic regulatory networks: applications to segmental patterning in *Drosophila*, in: R.P. Mondaini and R. Dilão (ed.), *BIOMAT 2005, Proc Int Symp Math Comp Biol*, World Scientific, pp. 71-88.
- Alves F & Dilão R. A simple framework to describe the regulation of gene expression in prokaryotes *C.R. Biologies* 328(5) : 429-444.