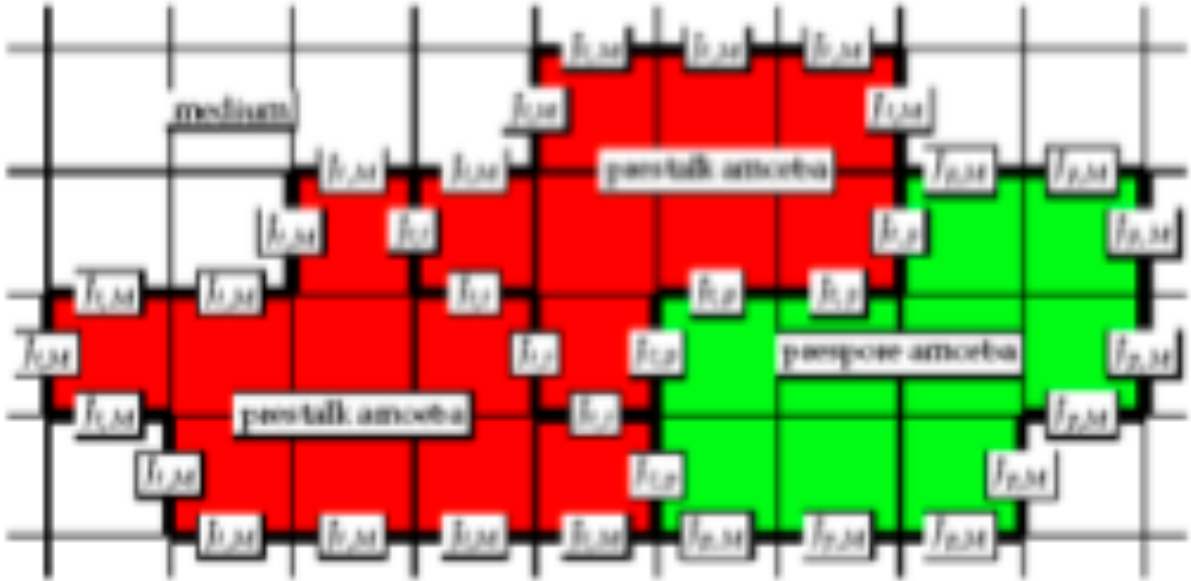
IN·NOMINE·PATRIS

Radboud University Nijmegen

From Pattern Formation to Morphogenesis

Multicellular Coordination in *Dictyostelium Discoideum*

A.F.M. Marée (2000). PhD Thesis, UU.


medium
powtalk amoeba
powtalk amoeba
pwrpose amoeba

$$H_\sigma = \sum_{\text{all } \sigma,\sigma' \text{ neighbours}} \frac{J_{\tau_\sigma,\tau_{\sigma'}}}{2} + \sum_{\text{all } \sigma, \text{medium neighbours}} J_{\tau_\sigma,\tau_{\text{medium}}} + \lambda(v_\sigma - V)^2, \quad (1.1)$$

Two-Scale Cellular Automata with Differential Adhesion

Mathematical model of Dictyostelium

7

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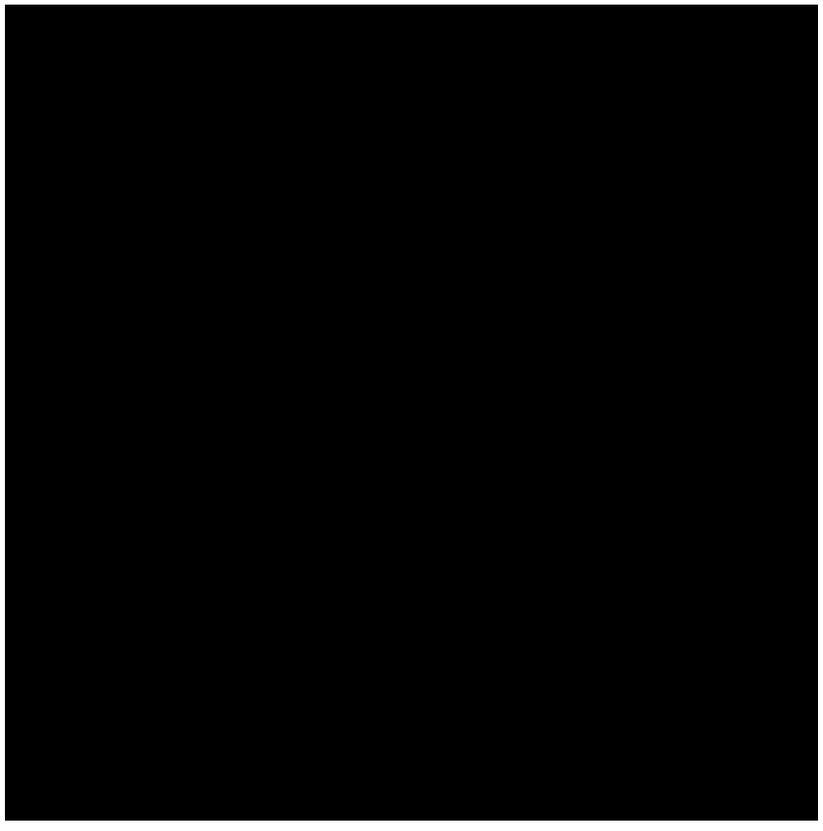

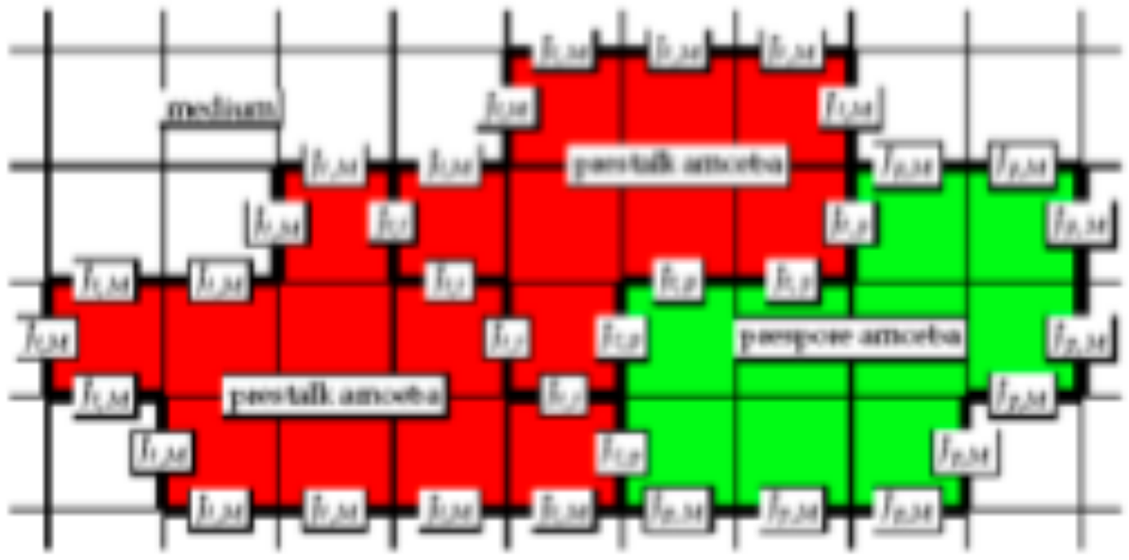

Two-Scale Cellular Automata with Differential Adhesion

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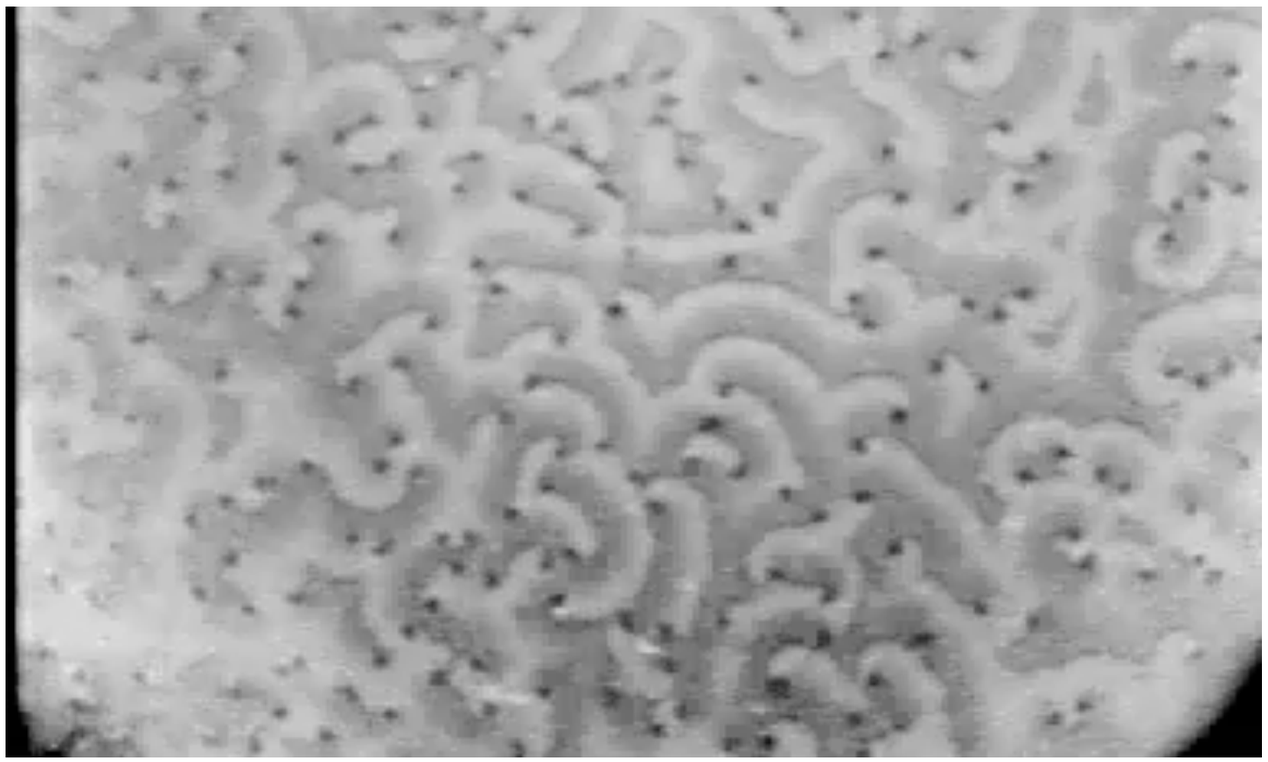
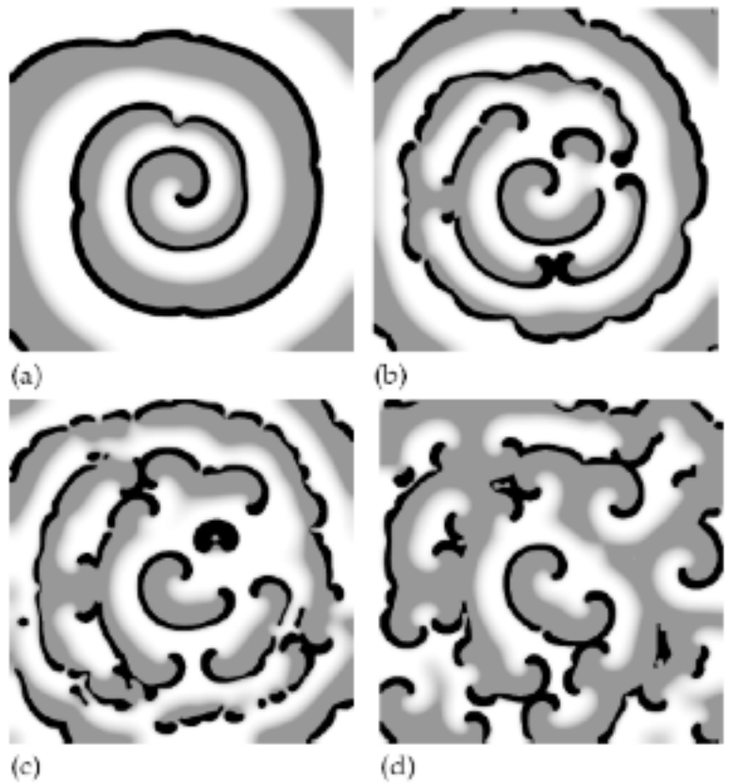
Mathematical model of Dictyostelium

Spiral Breakup in Excitable Tissue due to Lateral Instability

Marée, A. F. M., & Panlov, A.V. (1997). *Physical Review Letters, 78*,1819-1822.





$$\frac{\partial e}{\partial t} = \Delta e - f(e) - g,$$

$$\frac{\partial g}{\partial t} = D_g \Delta g + \varepsilon(e,g)(ke - g),$$