Traveling motility of actin lamellar fragments under spontaneous symmetry breaking

Martina Magliocca
Universidad de Sevilla, España
mmagliocca@us.es

Cell motility is connected to the spontaneous symmetry breaking of a circular shape. In [1] Blanch-Mercader and Casademunt performed a nonlinear analysis of the minimal model proposed by Callan and Jones [2] and numerically conjectured the existence of traveling solutions once that symmetry is broken. In this talk, we prove analytically that conjecture by means of nonlinear bifurcation techniques.

Trabajo en conjunto con Claudia García & Nicolas Meunier.

Referencias

[1] Blanch-Mercader, C., Casademunt, J. (2013). Spontaneous motility of actin lamellar fragments. Physical review letters, 110(7), 078102.

[2] Callan-Jones, A. C., Joanny, J. F., Prost, J. (2008). Viscous-fingering-like instability of cell fragments. Physical review letters, 100(25), 258106.