

Classification and stability analysis of polarising and depolarising travelling wave solutions for a model of collective cell migration.

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We study travelling wave solutions of a 1D continuum model for collective cell migration in which cells are characterised by position and polarity. Four different types of travelling wave solutions are identified which represent polarisation and depolarisation waves resulting from either colliding or departing cell sheets as observed in model wound experiments. We study the linear stability of the travelling wave solutions numerically and using spectral theory. This involves the computation of the Evans function most of which we are able to carry out explicitly, with one final step left to numerical simulation.