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Laws of motion for spiral waves in the complex Ginzburg-Landau equation in bounded domains

In this talk we consider multiple spiral wave solutions of the general cubic complex Ginzburg-Landau equation in bounded domains. We shall show our results on the effect of the boundaries on the spirals' motion under homogeneous Neumann boundary conditions for small values of the twist parameter q. Explicit laws of motion for rectangular domains can be derived and we show that the spirals motion becomes exponentially slow for a particular critical relation between the twist parameter and the size of the domain. This is a joint work with Prof. Jon S. Chapman.