



## Unstable periodic orbits in self-exciting dynamos

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Hide et al (1996) introduced a nonlinear system of three coupled ordinary differential equations to model a self-exciting Faraday disk homopolar dynamo. However only very small selection of its possible behaviours was presented in that paper. We return to the original model with a view to performing a more extensive analysis of this dynamo, presenting bifurcation transition diagrams, exhibiting the coexistence of multiple attractors and identifying the lowest order unstable periodic orbits. Other dynamo models are amenable to similar analyses.

Reference:

I.M. Moroz (2007) The Hide, Skeldon, Acheson dynamo revisited *Proc. R. Soc. Lond. A* **463**, 113–130.