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Matthias Kurzke, Christof Melcher, Roger Moser and Daniel Spirn*

(spirn@math.umn.edu), 206 Church St SE, Minneapolis, MN 55455. *Dynamics of vortices in a damped Gross-Pitaevskii equation.*

We consider the dynamics of a Gross-Pitaevskii type equation of mixed type with both parabolic and Schrodinger terms. This equation serves as a model for both micromagnetic dots and superconductivity. Under the limit of a large coupling constant, vortices condense down to points and satisfy a first order ODE. This is joint work with M. Kurzke, C. Melcher, and R. Moser. (Received March 02, 2009)