Many scientific simulations and models are based upon one or more coupled field equations. Fields are often modelled as a regular mesh or grid of individual field variables where each variable is a scalar or vector quantity. Visualising these fields interactively can be a great aid to debugging as well as understanding and interpreting the results of the numerical simulation. Visualisation allows a human observer to inspect a simulation and identify interesting events or phenomena. Visualising scalar field equations is a widely researched area [1], however less research has been conducted with visualising fields of complex numbers or vectors. The visualisation of such fields present extra challenges as each cell has both a real and imaginary part that must be displayed. We discuss the challenges faced with visualising complex fields in two- and three-dimensions and present a number of methods for visualising them as they evolve over time. The need for these visualisation methods arose from our study of the Time-Dependent Ginzburg-Landau (TDGL) equation [2].

**References**


