

The heat equation with melting - Michael Page

When a substance melts or evaporates, the unsteady temperature variations can be determined by solving the classical heat equation with a moving boundary - the so-called Stefan problem. This project will review both theoretical and numerical aspects to solving this type of problem for some simple one-dimensional configurations, for example in both Cartesian and spherical geometries. This will involve a literature search as well as some simple numerical computations and/or plots of the solutions for special cases.