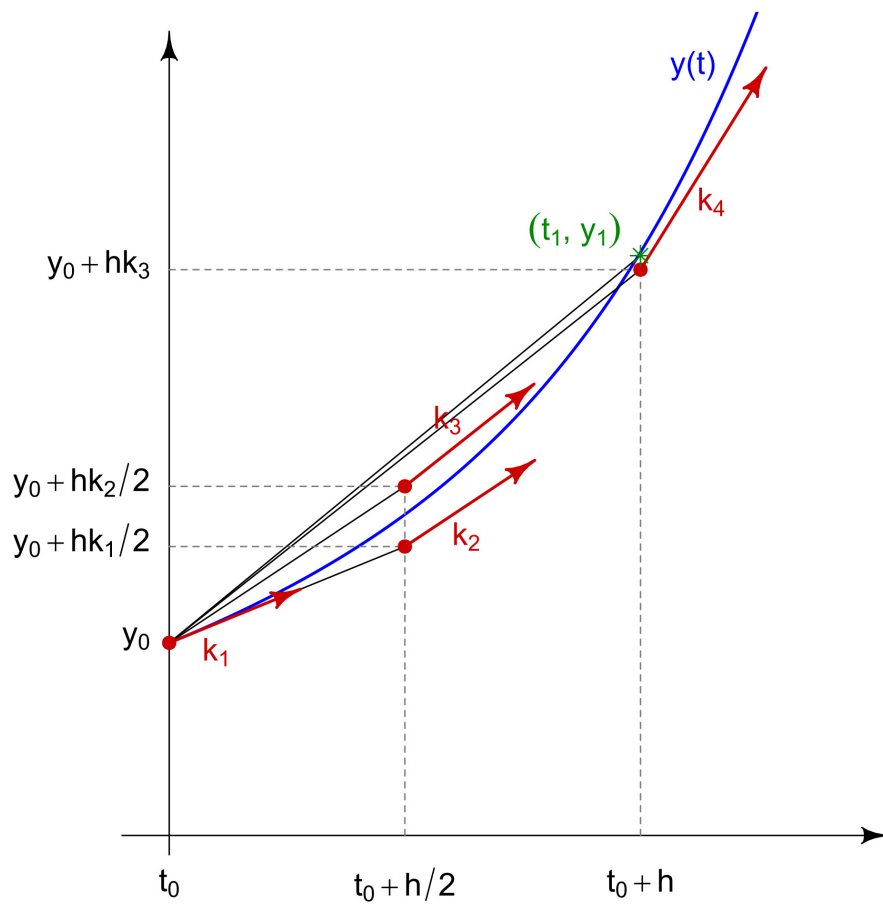


Final Project

Numerical Solutions to PDEs

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1 Basic Heat Equation

$$u_t = 2u_{xx}$$

$$u(0, t) = u(3, t) = 0$$

$$u(x, 0) = \sin(\pi x) + \sin(2\pi x)$$

2 General Wave Equation

3 Two-Dimensional General Heat Equation

4 Poisson's Equation

5 Spacecraft Application