

PDG I **(Tutorium)**

Tutorial 1 (Review of ODEs)

In this tutorial we covered the following topics:

- The definition of an Ordinary Differential Equation, some examples.
- Solving first-order ODEs of the form

$$\begin{cases} u'(x) = f(x, u(x)) & \text{on } (x_0 - h, x_0 + h) \\ u(x_0) = y_0 \end{cases}$$

via Picard-Lindeloff (proved via Banach's Fixed Point Theorem in class).