

II. Nonlinear Equations

Goals: - solve nonlinear (systems of) equations numerically
- understand that this can be hard...

Why? - Generally, the nonlinear equations that appear in practice are not solvable by analytical means $x = \dots$

- Implicit methods for ODEs ... Very important for stiff problems (... very common in practice)
- Steady state CSTR example

MATLAB: `fsolve`

II.1 Single nonlinear equations

Problem: Solve $f(x) = 0$ for $f: D=[a,b] \rightarrow \mathbb{R}$

Iterative techniques

