

Parametric Phenomena: physics on many levels

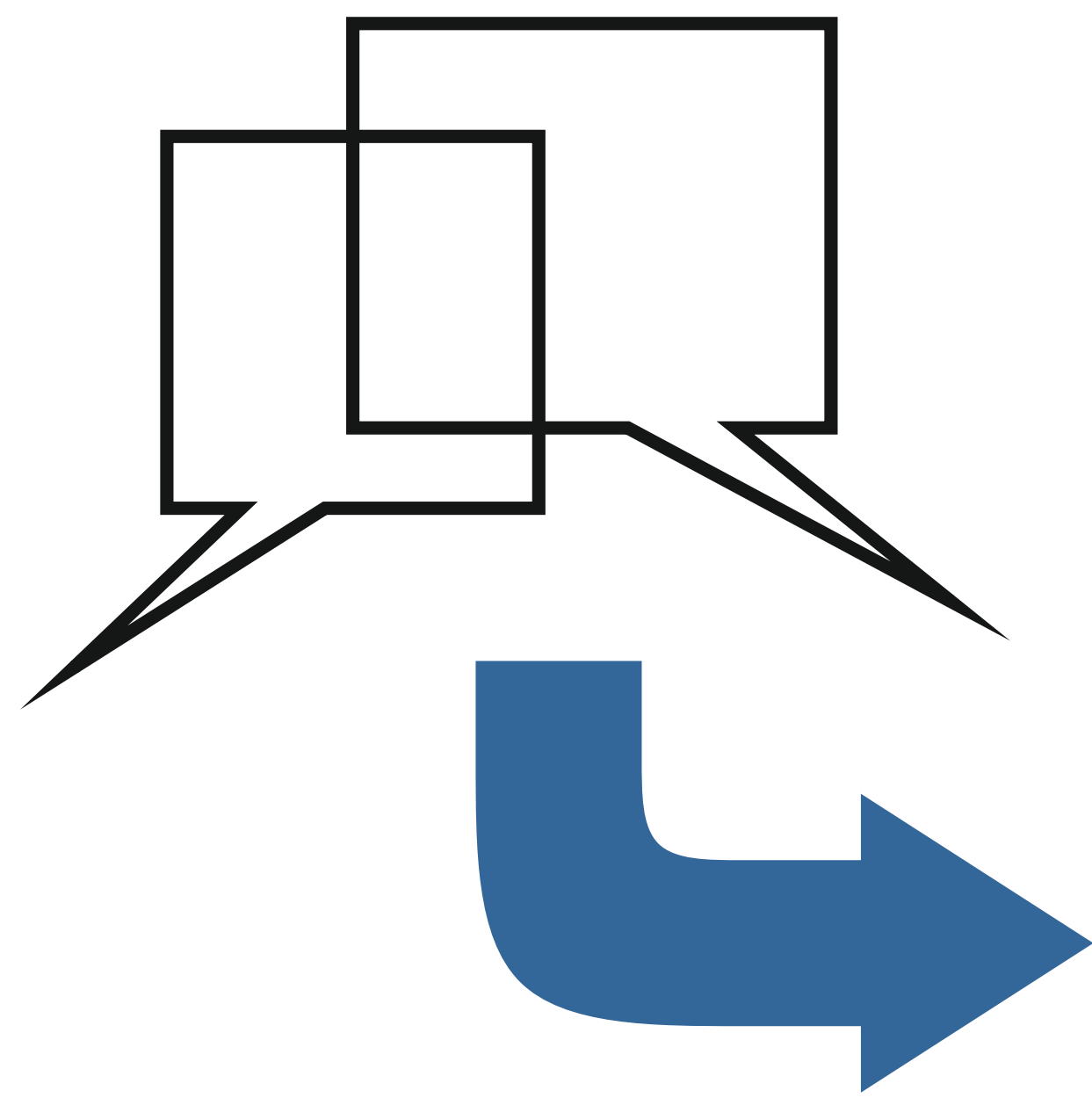
In this semester course, students experienced a complex physical phenomenon through a combination of guided literature study, solving of pedagogical tasks, informal discussions, and software-based modelling. During the entire semester, they built up understanding to describe one out of many real-world cases.

preparation: read selected literature

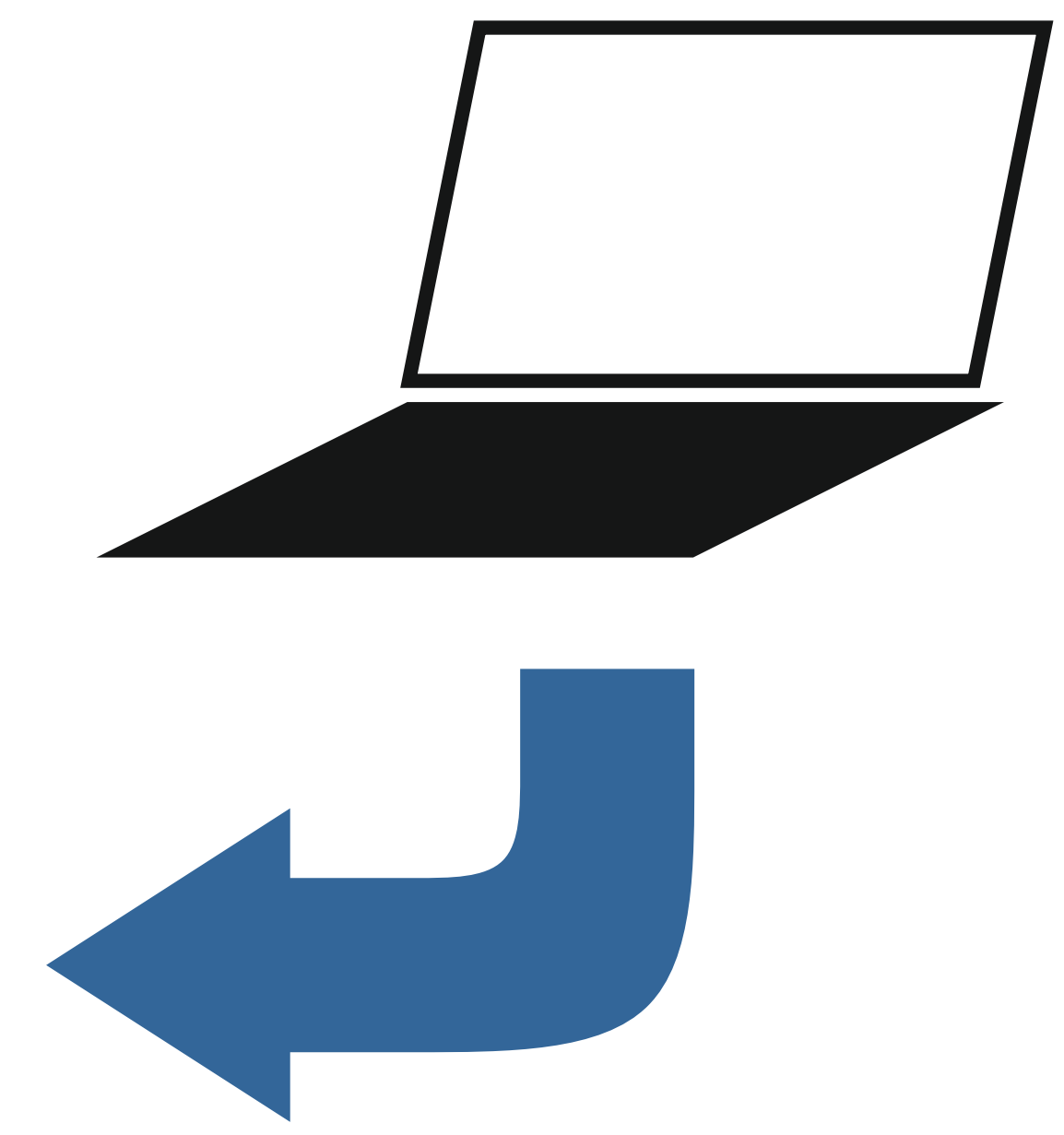
$$\ddot{x} + \omega_0^2[1 + \lambda \cos(2\omega t)]x + \Gamma\dot{x} + \alpha x^3 + \eta x^2\dot{x} = 0$$

$$S_v = \frac{S_d C^2}{(\omega_0^2 - \omega^2)^2 + \omega_0^2 \omega^2 / Q^2} \quad H = \hbar\omega_0(a^\dagger a + 1/2) + \dots$$

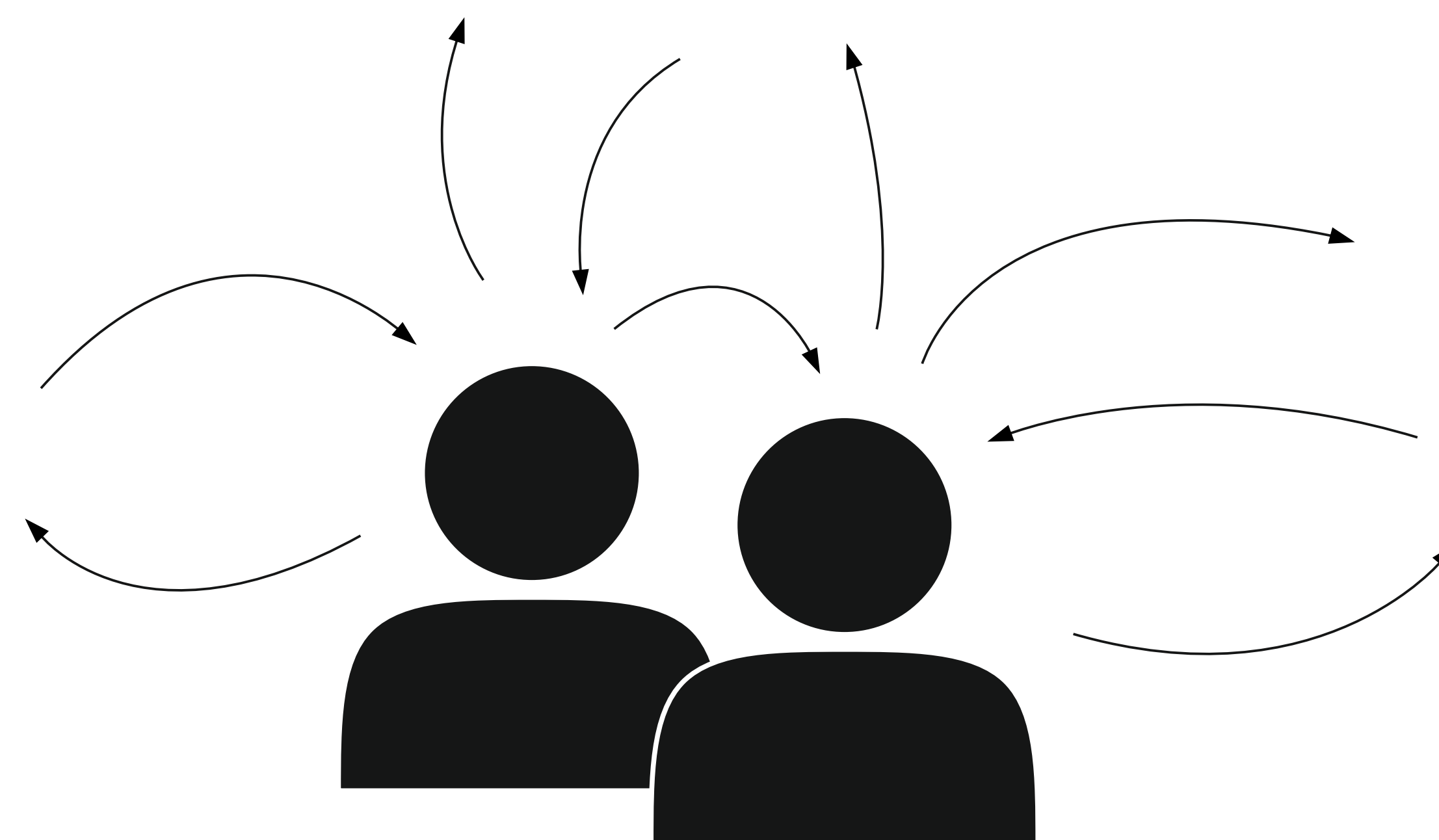
teachers are available for discussions



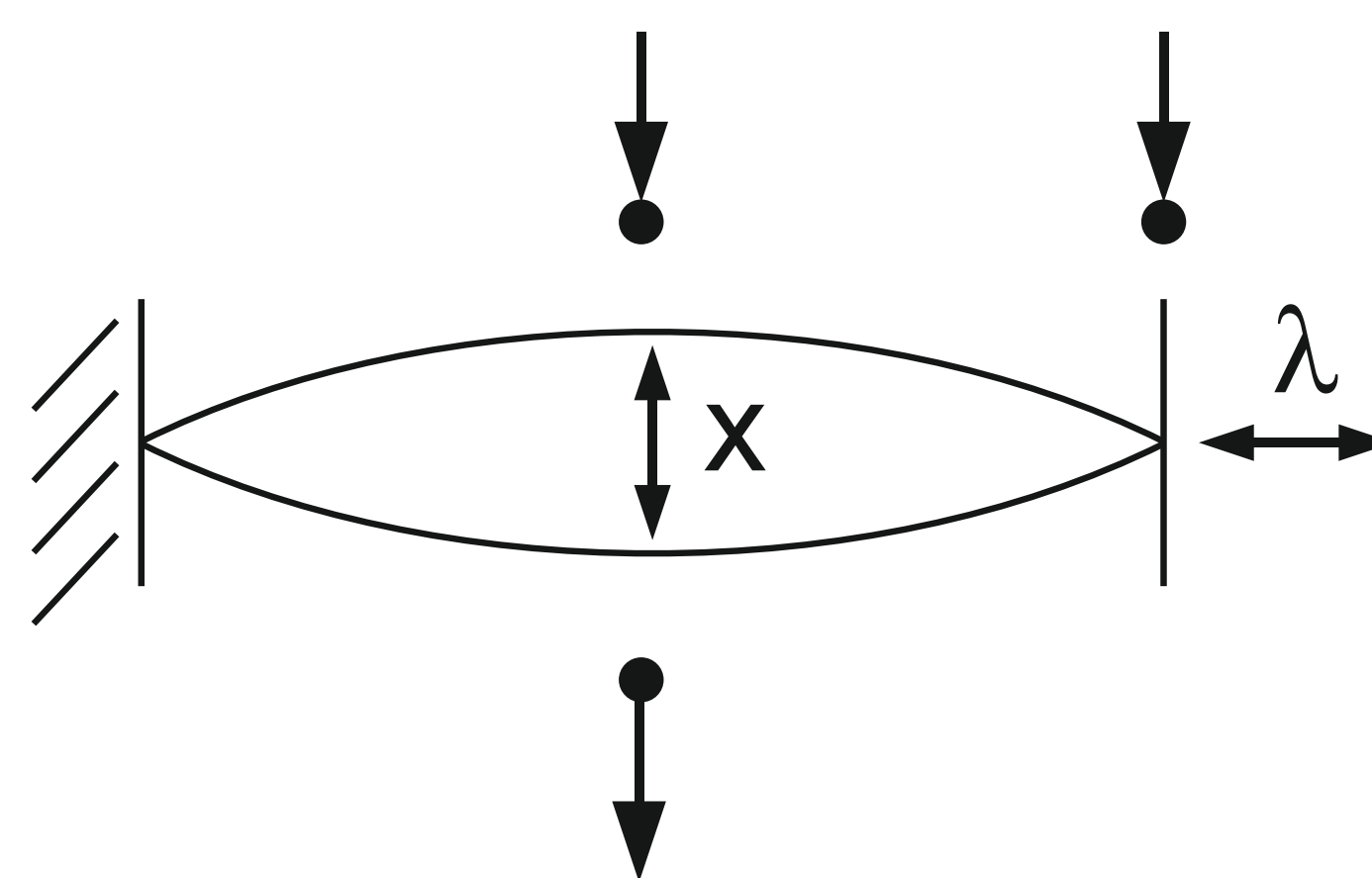
numerical software tools allow hands-on experience



in-class: students solve tasks



goal: build up theory model



assessment: every student presents one applied case in a poster session

