

1. What is multiphysics?

Doing two things at once

is sometimes harder than just doing two things at once

- Multiphysics is *the simultaneous simulation of different physical aspects of a single system*
- Example: **conjugate convective heat transfer**
 - a solid body sitting inside a moving fluid, to which we introduce a heat source
 - heat transfer is modelled by e.g. the Laplace equation
 - fluid convection is modelled by e.g. Navier–Stokes and energy equations
 - but these two physical phenomena *interact*