

## How to build mathematical models?

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In this talk, I will use classical examples from the world of fluid dynamics, biophysics and soft matter mechanics to highlight:

- (i) how applied mathematics tends to be used to rationalise experimental data;
- (ii) how exactly one goes about building mathematical models;
- (iii) what approximate solutions to equations are;
- (iv) and why sometimes you don't have a choice and need to use a computer.