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## Step-by-step: modelling galaxies over cosmic time

*Wednesday 29 May 2024 14:00 (30 minutes)*

The formation and evolution of galaxies is inherently a multi-physics and multi-scale problem, involving dark matter, star formation and feedback, collisional relaxation-driven N-body dynamics, stellar and binary evolution, and supermassive black-holes (and much more!). Numerical simulations are an extremely powerful tool to incorporate these physical processes and explore their interplay, but suffer limitations from the large range of scales at play. In this talk, I will review recent advances in numerical simulations of galaxy formation and evolution, with a focus on those that aim to resolve the multiphase nature of the interstellar medium and the stellar body of galaxies.

### Keyword-1

numerical simulations

### Keyword-2

galaxies

### Keyword-3

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