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## Introduction to collisions at LHC

*Wednesday 19 February 2025 17:00 (1h 30m)*

- 1\ Hadron interactions. A few reminders (kinematics, etc.). Proton-proton scattering. Hard scattering.
- 2\ QCD and parton densities. Lepton-proton scattering. Scaling violation.
- 3\ Monte Carlo generators. Parton showers: fragmentation and hadronization.
- 4\ Luminosity and cross-section measurements. Ingredients for cross-section measurement. Luminosity.
- 5\ QCD and jet physics. Higher orders. Jet algorithms. Jet energy scale. Jet cross-section measurements.

**Presenter:** VARELA, João (LIP)