# Orbital dynamics and Earth's environment: a definition

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**Résumé**

In this preliminary lecture, we will be presenting how describing an orbit in the Earth environment, through time series of positions and velocities, or through the keplerian elements that give a geometrical interpretation of trajectories defined when proving the three Kepler famous laws. The main dynamical families of orbit around the Earth will be defined as well. Each part of this short description will be the subject of further explanations later in the week. An example showing how the Earth's environment features can change the artificial satellites spacecraft orbits will be providing, through the effects induced by strong solar events on the altitude of low satellites.

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