Contribution ID: **59** Type: **Invited**

The evolution and composition of exoplanets: from low-mass multiplanetary systems to gas giant interiors

Thursday, 16 May 2024 09:00 (30 minutes)

In the midst of the era of JWST, CHEOPS and ground-based spectrographs such as ESPRESSO, we are obtaining unprecedented data, spanning from atmospheric metallicities of sub-Neptunes to tidal deformation of hot Jupiters. However, a deeper characterization requires radii of low-mass planets around Sun-like stars, precise ages at all spectral types, and Love numbers at colder equilibrium temperatures. In this talk, I will discuss the state of the art in exoplanet evolution and composition, and how PLATO's upcoming data together with modelling tools will enable the community to make progress in various open questions. These include the origin of the radius valley that separates Super-Earths and sub-Neptunes, the evolution of low-mass multiplanetary systems, and the formation and interior structure of gas giants.

Primary author: ACUÑA, Lorena (Max Planck Institute for Astronomy)

Presenter: ACUÑA, Lorena (Max Planck Institute for Astronomy)

Session Classification: Exoplanets Evolution