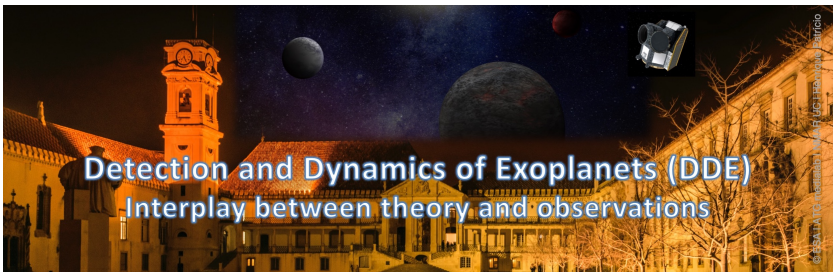

Contribution ID: **39** Type: **not specified**

Star-planet interactions and exoplanets' characterisation

Thursday, July 10, 2025 2:00 PM (30 minutes)

Tidal forces between short-period planets and their host stars are extreme. These lead to the deformation of the planet and the shrinkage of the planet's orbit.. Measuring the tidal deformation of the planet would allow us to estimate the second degree fluid Love number and gain insight into the planet's internal structure. Measuring the tidal decay timescale would allow us to estimate the stellar tidal quality factor, which is key to constraining stellar physics. The community has been making a large effort to measure these effects. In particular, we are using the CHEOPS mission and JWST. I will present the CHEOPS measurements of the tidal deformation of WASP-103b and WASP-12b. Moreover, I will also present our measurements of the tidal decay of a few targets including WASP-103b and explore our future perspectives.

Presenter: BARROS, Susana (Instituto de Astrofísica e Ciências do Espaço)

Session Classification: Star-planet interactions and exoplanets' characterization