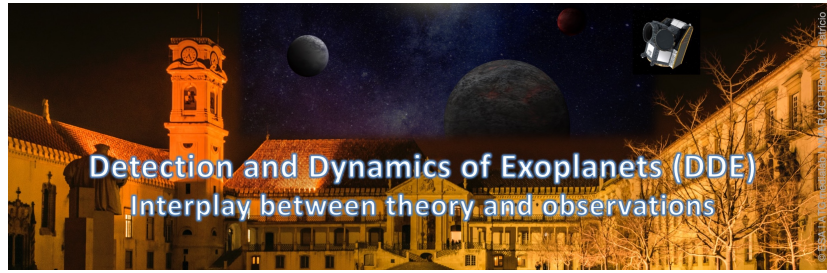


Detection and Dynamics of Exoplanets (DDE): Interplay between theory and observations



Contribution ID: 7

Type: **not specified**

Constraints on transit-detected system architectures from formation and dynamical studies

Tuesday, July 8, 2025 4:45 PM (15 minutes)

Many transit-detected extrasolar systems harbor complex dynamical evolution governed by two-body resonances and/or chains of resonances. I will discuss how formation and dynamical studies can be useful to constrain the orbital parameters of these systems, which generally suffer from significant observational uncertainties. More precisely, I will show how i) periodic orbits can serve as dynamical clues to validate the parametrization of detected systems, ii) TTVs keep track of the migration history of planetary systems and provide signatures of three-body resonances accessible by future monitoring of the systems, and iii) the offsets in resonant chains are shaped by planetary migration and tides raised by the star.

Presenter: LIBERT, Anne-Sophie (University of Namur)

Session Classification: Stability and dynamics of planetary systems