



## **Planet Formation and Habitability**

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Extrasolar planetary systems show an extreme diversity in mass and orbital architecture, and, very likely, in habitability. Explaining this diversity is one of the key challenges for theoretical models and requires understanding the formation, composition and evolution of planetary systems from the stage of the protoplanetary disk up to the full mature planetary system.

I will review in this contribution the different models of planet formation and how they can be related to planetary habitability. In a first part, I will review the main planetary system formation models, and how, from these models, the composition of planets can be predicted. In a second part, I will link the results of these early phases of planetary systems, to the potential planetary habitability. Finally, I will show how it is possible, from transit observations, to put constraints on the water content of extrasolar planets.