



Institute colloquium

# How do planets and moons form? Can we observe them with the new generation of telescopes?

**Judit Szulágyi (ETH Zurich)**

**Host: Bingqing Cheng**

The formation of planetary systems takes place in the last phase of star formation. During my talk I will guide the audience through the process, and explain our current understanding of planet formation, as well as discussing the open questions in the field. Thanks to the new generation of telescopes both on the ground and in space allows us to take pictures and other types of measurements of currently forming planetary systems, hence providing the initial- & boundary conditions for the planet formation models. In my group we make new planet formation algorithms, and make gigantic supercomputer simulations with these to answer the remaining open questions about the origin of planets and moons. From our simulations, we also make observational predictions for different telescopes, such as the recently launched James Webb Space Telescope. We astrophysicists are very excited to see what new observations and data this telescope will provide about the planet formation process, pushing us forward to understand this complex puzzle. Since life developed on the very young Earth, studying planet formation is the first step to understand in what conditions and from what building blocks life came to be. Understanding the possible planet and moon population in the universe helps us estimate how many habitable worlds can exist out there.

**Monday, October 24, 2022 11:30am - 12:30pm**

ISTA Campus Raiffeisen Lecture Hall



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: <https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.