

## **Disk-planet connection: exoplanet compositions informed by disk models**

### **Project description**

Planets form from the remnant material left over by the star formation process. How planetary systems form is still a matter of heavy debate. Several scenarios are proposed in the literature. The aim of this project is to use various planet formation scenarios to simulate the impact they have on the final outcome of exoplanet composition. For this we combine knowledge from protoplanetary disks, planet formation theory, and the physics of exoplanet atmospheres. The PhD student will combine the knowledge in these fields to come to a predictive model of atmospheric composition. Focus will also be given to the impact of exotic events in the planet formation process like collisions and planet-planet interactions to make predictions for the effects of planetary architecture on atmospheric composition. The final aim is to link the predictions from the project to observations from the JWST MIRI and NIRSPEC instruments.

### **Innovative Training Network (ITN)**

This project is part of the Marie Skłodowska-Curie Innovative Training Network (ITN) CHAMELEON (link to [YYY](#)): Virtual Laboratories for Exoplanets and planet forming Disks. The ITN combines the expertise of eight European research institutes (Universities of St Andrews, Groningen, Copenhagen, Edinburgh, Leuven and Antwerp, the Max-Planck Institute in Heidelberg and the Netherlands Institute for Space Research) to cover all the relevant aspects of this complex modelling task, including observation and interpretation. All students will obtain double degrees and training secondments are next to the university nodes foreseen at LUCA School of Arts, Copenhagen Game Lab and the Scottish Parliament Information Center). The network consists of 15 Early Stage Researchers (PhD students) and the respective supervisors/local research groups. See also [LINK TO ZZZ](#) for a list of all open PhD positions within the network. The main supervisor for this project is dr. Michiel Min (SRON, Utrecht), secondary supervisors are prof.dr. Inga Kamp (University of Groningen) and prof.dr. Uffe G. Jørgensen (University of Copenhagen).

### **Requirements**

We seek an excellent student with a strong background in physical sciences and/or astrophysics. A successful candidate must hold a Masters degree or equivalent by the starting date of the position. Previous research experience on planet forming disks, exoplanets, and/or astrochemistry and a track record of team work/mobility will be important criteria for the selection. Note that the general eligibility and mobility rules of Marie Skłodowska-Curie Actions apply, i.e. they must not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting partner for more than 12 months in the 3 years immediately before the recruitment date.