CHAMELEON

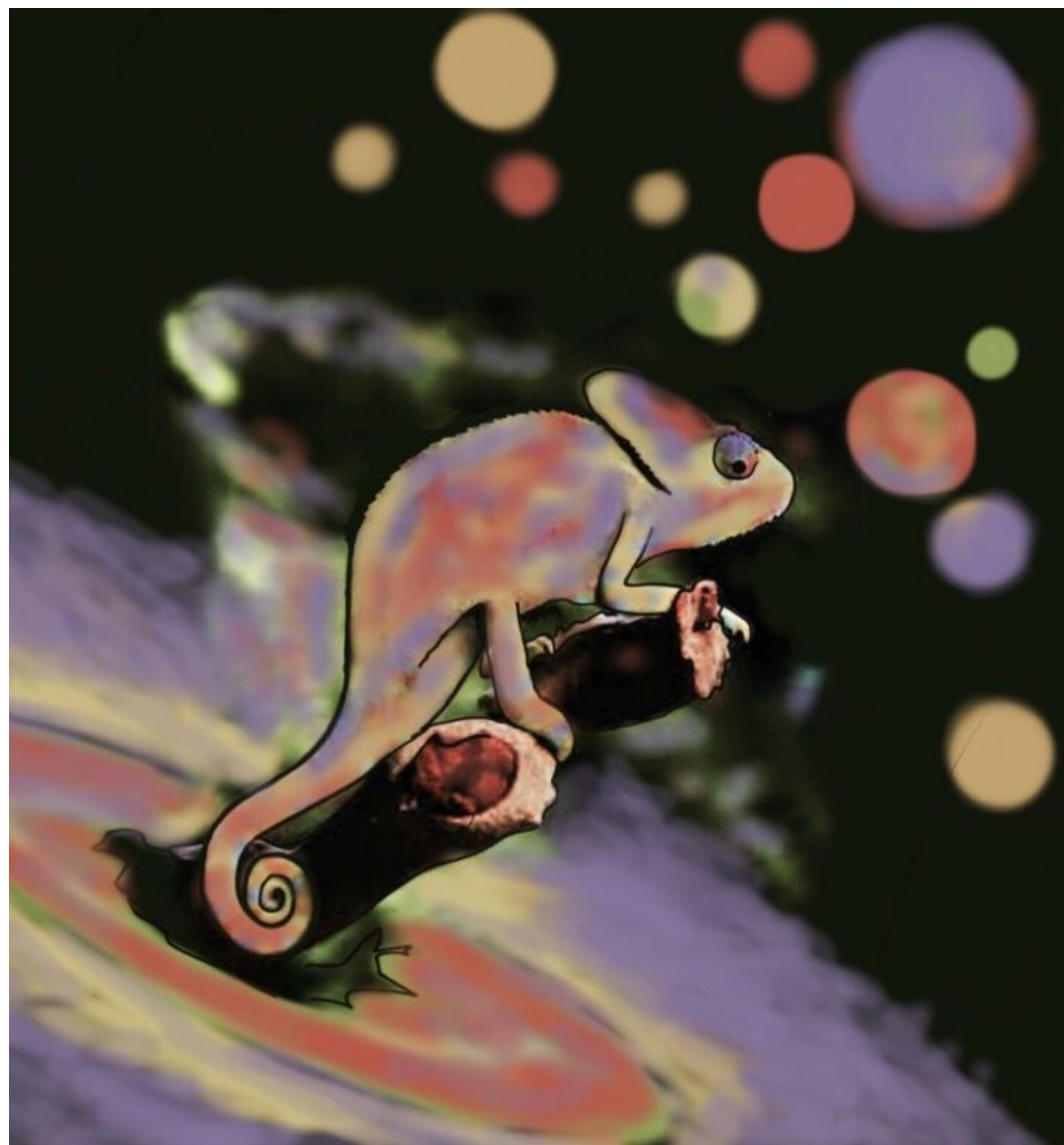## Virtual Laboratories for Exoplanets and Planet-Forming Disks

MORE
ABOUT US

presented by **Ruth-Sophie Taubner**, **Christiane Helling and the CHAMELEON consortium**

KEY FACTS

WHAT?

CHAMELEON was a Marie Curie Innovative Training Network (MC-ITN) focusing on the development of so-called **virtual laboratories** for the field of **exoplanet atmospheres** and **protoplanetary disks**. These virtual laboratories play a key role in simulating so far unexplored physico-chemical environments and help to analyse in detail current and future disk and exoplanet observations. A main aim was also the knowledge transfer from the planet to the disk community concerning the simultion of chemical processes in warm and dense environments, electrifiction, and lightning. Further, the CHAMELEON scietific topics have been included as scietific hook for the artworks by atists using various media and translated into teaching materials.

WHO?

15 PhD students and more than eleven supervisors at eight different institutions spread over Europe


MARIE CURIE **ACTIONS**

ÖAW IWF

TU Graz
Graz University of Technology

university of groningen

UNIVERSITY OF COPENHAGEN

THE UNIVERSITY of EDINBURGH

KU LEUVEN

University of Antwerp

University of St Andrews

THE CHAMELEONs

Flavia Amadio,
Irradiation and impact of stellar variability on exoplanet atmospheres

Beatriz Campos Estrada,
Low-temperature chemistry for DRIFT-MARCS
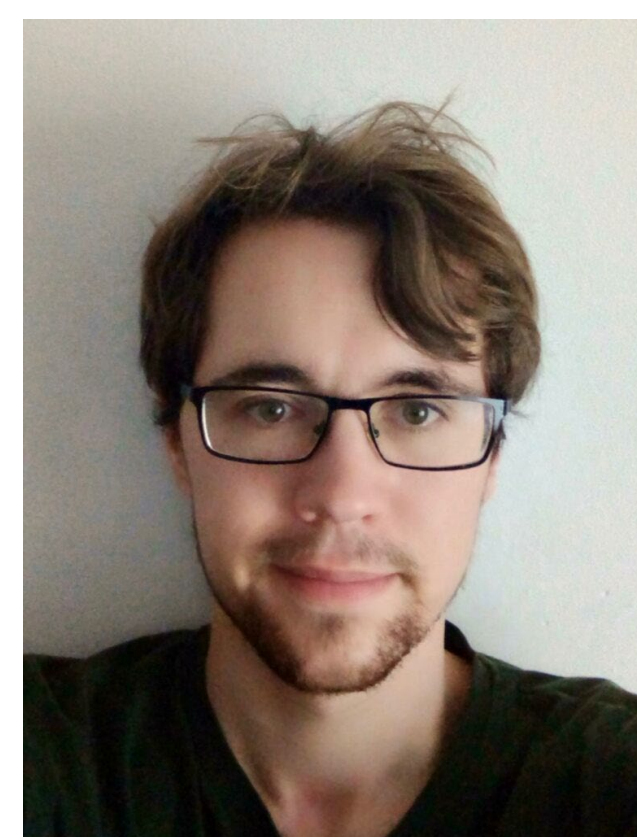
Sven Kiefer,
Cloud formation in 3D exoplanet atmospheres

Linus Heinke,
Analysing observations via complex modelling and Bayesian inference

Helena Lecoq Molinos,
Microphysics of cloud formation: The path to heterogeneous nucleation

Nanna Bach-Møller,
Charge conservation and cloud formation in planet atmospheres

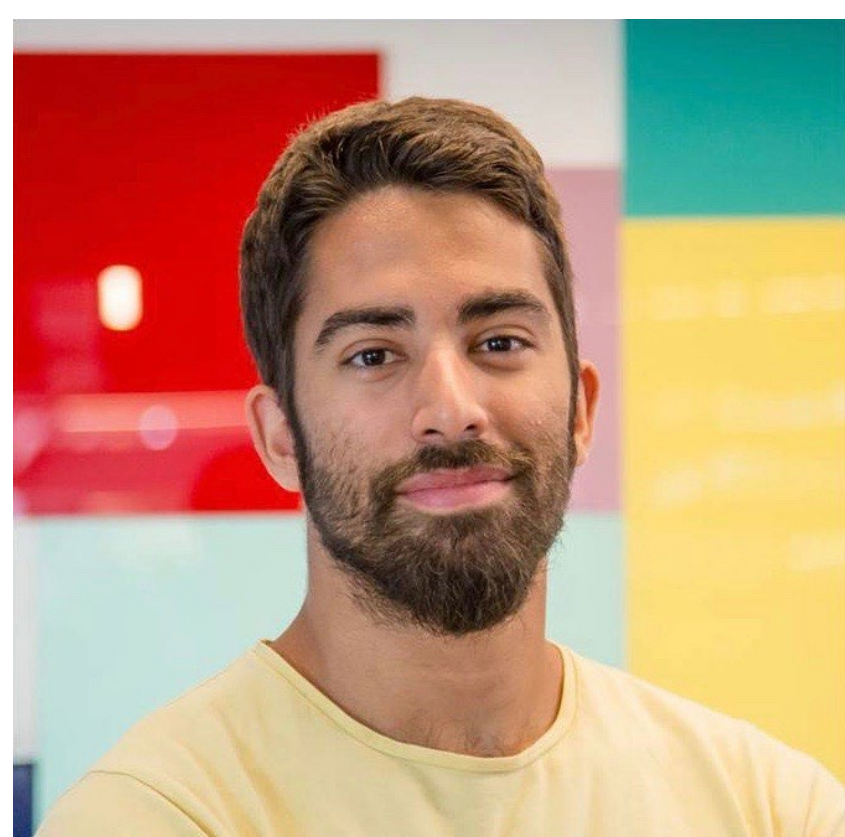**Thorsten Balduin,**
Grain charges and lightning in disks

Jayatee Kanwar,
The warm chemistry in the inner disk

Till Käufer,
Machine learning from complex disk models

Areli Castrejon,
Disk-planet connection: exoplanet compositions informed by disk model

Francisco Ardevol Martinez,
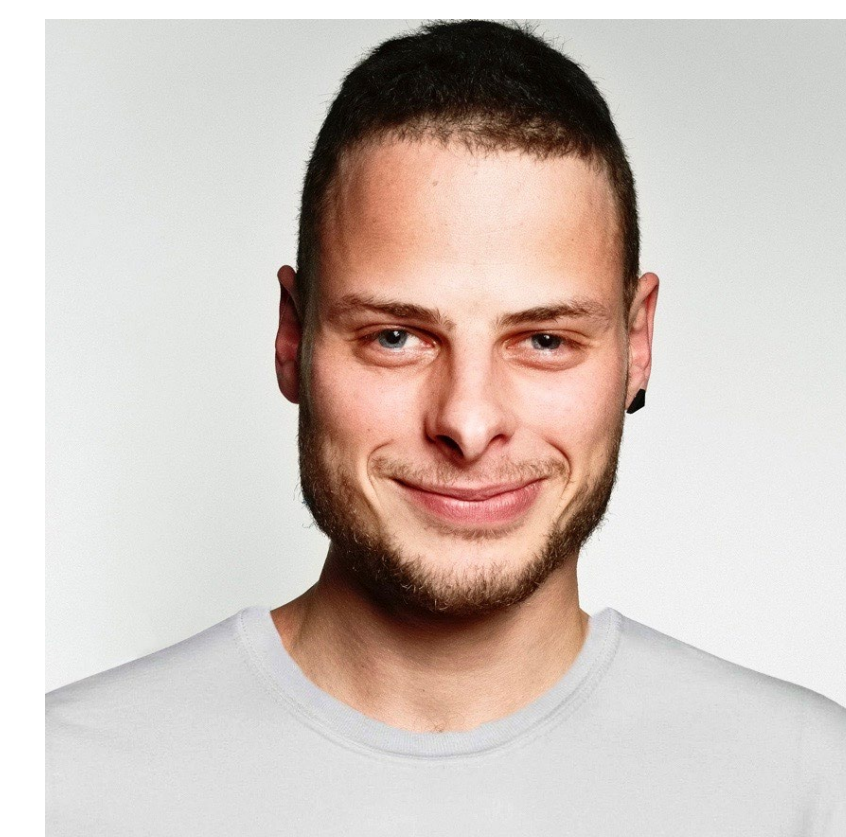*Machine learning for inferring physical and chemical parameters from exoplanet observations*

Aaron Schneider,
Connecting the atmosphere and the interior in extrasolar gas planets

Marrick Braam,
Modelling lightning in 3D GCMs and the detection of biosignatures

Oriel Marshall,
Translating scientific concepts & dilemmas into teaching material

Pieter Steyaert,
Effectiveness of Arts in STEAM interventions

Supervisory Board

Christiane Helling, Inga Kamp, Peter Woitke, Leen Decin, Uffe G. Jørgensen, Katrien Kolenberg, Anja Andersen, Paul Palmer, as well as Michiel Min, Ludmila Carone, Jesper Bruun, Peter Van Petegem, Veerle Van der Sluys, Graeme G. Cook, Diana Juncher, and Ruth-Sophie Taubner (CHAMELEON scientific officer)

THE CHAMELEON NETWORK IN NUMBERS

3 Winter Schools   **22** co-tutelle contracts   **24** network research meetings

33 Early Stage Researchers meetings   **2** student-lead retreats

120 papers so far   **44** supervisor meetings   **34** submitted deliverables

2024