

## VERLEIHUNG DER GREINACHER-PREISE 2022

**Datum/Zeit:** Mittwoch, 1. Februar 2023, 16:15 Uhr

**Ort:** Hörsaal 099, Exakte Wissenschaften, Sidlerstrasse 5, 3012 Bern

### Programm:

#### 1) Nachwuchspreis: Chloe Fisher (Center for Space and Habitability, Prof. K. Heng)

**Titel der Dissertation:**

Characterising Exoplanet Atmospheres using Traditional Methods and Machine Learning

**Laudatio:** In recognition of her work in the field of exoplanet science, specifically the development of both machine learning (in collaboration with biomedical engineers at Bern) and traditional Bayesian inference techniques for interpreting the spectra of the atmospheres of exoplanets, which have implications for understanding the formation and climate of exoplanets using next-generation telescope data.

#### 2) Hauptpreis: Frédéric Allegrini (Southwest Research Institute, San Antonio, TX, USA)

**Laudatio:** In recognition of his work in the field of space science, specifically the development, design and testing of space plasma instrumentation, the analysis and interpretation of data obtained from Jupiter's magnetosphere by the Juno mission of NASA (auroral electrons) and from the heliosphere (energetic neutral atoms and ions), as well as his contributions to the technology associated with thin carbon foils in instruments for space research.

### Kolloquium des Preisträgers

**Titel: Pushing the Envelope in Space**

**Abstract:** Space plasma instrumentation has evolved from robust concepts in the early phases of the space age to today's highly sophisticated detectors in different space programs. One constant in this evolution of technology is that more capable instruments that are brought to new places lead to discoveries and advance science. New inventions that enable new capabilities, such as the Greinacher circuit, do not happen often. Rather, most of the progress is made by smaller, more frequent steps. In this presentation, I would like to illustrate some of these small steps based on my personal experience over the past years. I will show some creative designs that may (or not) find their way into space. While they all use proven principles, they are also more capable than previous instruments in some aspects. And if successful, these and other new designs will be pushing the envelope in space.

**Anschliessend sind alle eingeladen zu einem Apéro mit den Preisträgern in der Wandelhalle**