Laura Elina Uronen

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EDUCATION Integrated MPhys Astrophysics (Hons)

2018 - Present

University of St Andrews, Scotland, UK

Expected graduation 2023

Current predicted classification: 1st. Deans' List in 2019, 2020, and 2021.

Dissertation: "Partial eclipse of the heart for HD 181793"

The project focused on determining the stellar characteristics of HD 181793, which I presented as a newly-identified eccentric binary system. I used MCMC fitting on transit and radial velocity data and spectral separation of the stellar components to determine the system parameters.

The British College of Benalmádena, Spain

2014 - 2018

4 A-levels: Mathematics (A*), French (A*), Physics (A), Chemistry (A)

EXPERIENCE Re

Research internship

Summer 2022

 $University\ of\ St\ Andrews\ School\ of\ Physics$

Six week summer research position with Dr Juan Santisteban Hernández. Studied the cataclysmic variable PHL 1445 to establish the nature of the secondary object in the system as an evolved brown dwarf. Used Python to work with VLT spectra and conduct Doppler tomography to obtain a model-independent radial velocity for the secondary object and thus determine its mass. Analysis of the spectral lines also confirmed the star as an evolved brown dwarf in agreement with stellar binary evolution theory.

President 2022 - 2023

University of St Andrews Physics Society

I organise and chair biweekly meetings for the committee, arrange our events calendar and delegate the organisational aspects to the appropriate committee members, coordinate with other Societies and the School, and attend and oversee our events. Jointly with the Treasurer I am in charge of managing and overseeing the Society's funding and successfully organised a sponsorship for the Society this year.

Class Representative

2021 - 2022

University of St Andrews School of Physics

Elected student representative position, attended regular meetings with other representatives and staff to raise student concerns and work on solving larger issues.

Student Ambassador

2019 - 2023

University of St Andrews School of Physics

Assist with prospective applicants' and students' visiting days, both in-person and online.

Various committee positions

2019 - 2022

University of St Andrews Physics Society 2021-2022 Vice President

2019-2021 Events convener & Publicity Officer

SKILLS

- Fluent English, Finnish, French; conversational Spanish; basic German and Mandarin Chinese.
- Extensive experience with Python particularly in astronomical statistical data analysis and spectral modelling. Have also done some machine learning methods.
- Experience in Fortran 90 in creating gravitational N-body simulations and running Monte Carlo radiation transport simulations, worked with grid code.
- Good communication and problem-solving skills from university group projects and extracurricular activities.