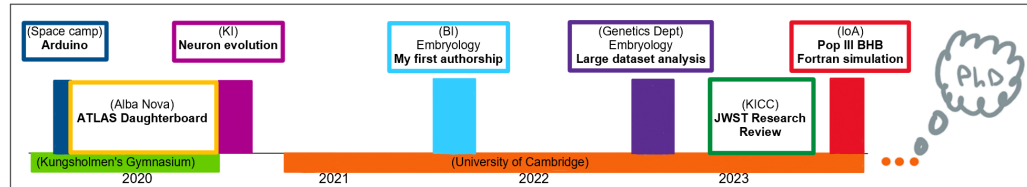


Sebastian Ljung

Natural Sciences at Cambridge

Email: sl2014@cam.ac.uk

Mobile: +447392703291



Education

Peterhouse, University of Cambridge

- Natural Sciences, starting a 4th year **integrated masters in Astrophysics**, with research experience in **astrophysics and embryology**.
- **Research review** (1st class, 77.9%), Kavli Institute for Cosmology [4 months, part-time]:
Contacted Dr. Laporte to write a review on JWST data on formation of the first galaxies, in Prof. Maiolino's group. Participation in weekly group meetings over the past 18 months.
- **Experimental project** (1st class, 74.2%) [3 weeks]: Tested results of a paper as a side project.
- **Computing project** (1st class, 81.9%) [4 weeks]: Vortices in Incompressible Schrödinger Flow.
- Selected 4th year modules(may change): Structure and Evolution of Stars, Life and Death of Galaxies, Relativistic Astrophysics and Cosmology, Exoplanets.

Research Experience

- **Upcoming Masters project in Prof. Maiolino's group, Kavli Institute of Cosmology:**
Incorporate the effects of spin/rotation on a binary population and spectral synthesis model using Fortran.
- **Internship in Anastasia Fialkov's group, Institute of Astronomy [8 weeks]:** 2023
Modified semi-analytic A-SLOTH simulation to model the influence of super-massive black holes (SMBHs) on nuclear stellar clusters (NSCs) and Pop III black hole binaries.
 - Independently proposed side-project to incorporating SMBHs, using Fortran90.
 - Incorporated equations from publications and justified modelling approximations.
 - Implemented and argued for significance of eccentricity on Stochastic GW Background.
- **Internship at Michael Imbeault lab, Genetics Department Cambridge [10 weeks]:** 2022
 - Handling large datasets (>30GB), on laptop, in a RAM and time-efficient manner.
 - Spearheaded side-project, and liaised with Prof. Reik's, lab, to determine potential targets for collaboration, using developed tool.
- **Internship at Wolf Reik lab, BI Cambridge [9 weeks]:** 2021
 - Co-authorship for answering reviewer's question by applying tool from previous internship.
 - Developed pipeline running both R and Python to investigate ZGA.
 - Presented and discussed project at conference poster session.

Publications

2022

- Taubenschmid-Stowers J., Rostovskaya M., Santos F., **Ljung S.**, ..., Reik Wolf
"Modelling human zygotic genome activation in 8C-like cells in vitro"

Referees

- Professor Anastasia Fialkov, Institute of Astronomy, Cambridge, UK, afialkov@ast.cam.ac.uk
- Dr Nicolas Laporte, Kavli Institute of Cosmology Cambridge, UK, nicolas.laporte@lam.fr
- Professor Wolf Reik, Director of ALTOS Cambridge (ex-director of BI), UK, wreik@altoslabs.com