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# Luke Conaboy

## Education

- 2018–present PhD Astronomy, *University of Sussex*, Brighton, UK.  
Supervisor: Prof. Ilian T. Iliev
- 2014–2018 MSci Physics with Astronomy (Hons), *University of Nottingham*, Nottingham, UK,  
Degree classification: First.

## Publications

### First author publications

- 2022 *Baryon drift effects at high-redshift*, **Luke Conaboy**, Ilian T. Iliev, David Sullivan,  
(in prep.) Anastasia Fialkov, Keri L. Dixon.

### Other publications

- 2022 *The short ionizing photon mean free path at  $z=6$  in Cosmic Dawn III, a new fully-*  
(in prep.) *coupled radiation-hydrodynamical simulation of the Epoch of Reionization*, Joseph  
S. W. Lewis, Pierre Ocvirk, Jenny G. Sorce, Dominique Aubert, **Luke Conaboy**, Paul  
R. Shapiro, Taha Dawoodbhoy, Romain Teyssier, Gustavo Yepes, Stefan Gottlöber,  
Kyungjin Ahn, Ilian T. Iliev, Émilie Thélie.
- 2022 *Impact of early binary populations on radiative feedback and the escape fraction of*  
(in prep.) *ionizing photons*, Keri L. Dixon, David Sullivan, Ilian T. Iliev, **Luke Conaboy**.

## Talks

- Sep 2021 *Baryon drift effects at high-redshift*, RAMSES User Meeting 2021, online.
- Dec 2020 *Baryon drift effects on small-scale structure*, PhD in a Pandemic 2020, online.
- Nov 2020 *Local Group zoom simulations and baryon drift*, CLUES Mid-term Meeting, online.
- Oct 2020 *Baryon drift effects on small-scale structure*, Third Global 21cm Meeting, online.
- Jan 2020 *Cosmological reionisation*, RAS Specialist Meeting, London, UK.

## Computer Skills

A list of languages or packages that I use regularly, or have experience using.

Languages Python (numpy, scipy, matplotlib, mpi4py, yt) (7 years/experienced), For-  
tran (3 years), Bash (3 years), MPI (3 years), Matlab (3 years), C/C++ (1  
year/novice).

Codes ramses, music, camb, gadget.

Other Linux, High performance computing,  $\text{\LaTeX}$ .

## Teaching

- Spring 2020 Foundation Mathematics B, *University of Sussex*.  
Assisting with workshops, marking.
- Autumn 2019 Scientific Computing, *University of Sussex*.  
Assisting with workshops, marking.
- Autumn 2019 Financial Computing with MATLAB, *University of Sussex*.  
Assisting with workshops, marking.

## Conferences and Workshops

### Organising

- 2020 SAZERAC 2020, *LOC*, online.  
Moderating discussion

### Attended

- 2021 RAMSES User Meeting.
- 2020 PhD in a Pandemic.
- 2020 Third Global 21cm Meeting.
- 2020 RAS Specialist Meeting, *Radiation-hydrodynamics*.
- 2019 RAMSES User Meeting.
- 2019 RAS Specialist Meeting, *Machine Learning in Astronomy*.
- 2018 Parallel and GPU Programming in Python.
- 2018 ICIC Data Analysis Workshop.

## Master's Thesis

- Title *Investigating the response in African climate anomalies to the El Niño-Southern Oscillation*
- Supervisor Prof. Frazer Pearce
- Authors Luke Conaboy and Mark G. Skilbeck
- Description We explore the use of remote sensing methods in examining the effects of El Niño, La Niña and other ocean-atmosphere systems on cloud coverage and vegetation growth in South and East Africa.