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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, *1st*.

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-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 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 (Cambridge, UK).

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), Fortran (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, L^AT_EX.

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

A non-exhaustive list of workshops, meetings and conferences 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.