

Centre for Astronomy and Particle Theory, University of Nottingham  
NG7 2QB  
UK

✉ [luke.conaboy@nottingham.ac.uk](mailto:luke.conaboy@nottingham.ac.uk)

🌐 [lconaboy.github.io](https://lconaboy.github.io)

🐙 [lconaboy](#)

🆔 0000-0002-6580-7177

# Luke Conaboy

## Employment

2022–present Research Associate, University of Nottingham, Nottingham, UK  
Supervisor: Dr Emma Chapman

## Education

2018–2022 PhD Astronomy, University of Sussex, Brighton, UK  
Supervisor: Prof Ilian T. Iliev  
Thesis: Simulations of structure formation and feedback at high redshift  
2014–2018 MSci Physics with Astronomy, University of Nottingham, Nottingham, UK  
Degree classification: First

## Publications

First author publications

2022 *Relative baryon-dark matter velocities in cosmological zoom simulations*, **Luke**  
(in review) **Conaboy**, Ilian T. Iliev, Anastasia Fialkov, Keri L. Dixon, David Sullivan

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

## Conference proceedings

2022 *The Reionisation of the Local Universe in the Hestia Suite*, John von Neumann Institute for Computing Symposium, **Luke Conaboy**, Ilian T. Iliev, Noam I. Libeskind

## Supervision

2022–present Assistant supervisor to a PhD student (Main supervisor: Dr Emma Chapman), University of Nottingham

## Talks

Jul 2022 *Hestia in the EoR*, CLUES Meeting 2022, Madrid

- 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

## Awards

- 2022 Physics Finalist, STEM for Britain

## Grants

- 2022 Co-PI (PI: Dr Noam I. Libeskind, PC: Prof Ilian T. Iliev) JUWELS (Jülich, Germany) computing time (13.3M core-h, applied) (**11M core-h, granted**)

## 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<sup>A</sup>T<sub>E</sub>X

## 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

## ■ Outreach

- 2023 **Talk to local high school**, online  
45m talk to GCSE-level students