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Luke Conaboy

Employment

- 2023–present Research Fellow, University of Nottingham, Nottingham, UK
Supervisor: Prof James Bolton
- 2022–2023 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

- 2023 *Relative baryon-dark matter velocities in cosmological zoom simulations*, **Conaboy**, Iliev, Fialkov, Dixon, Sullivan, MNRAS 525(4)

Other publications

- 2024 *The Lyman-limit photon mean free path at the end of late reionization in the Sherwood–Relics simulations*, Feron, **Conaboy**, Bolton, Chapman, Haehnelt, Keating, Kulkarni, Puchwein, MNRAS 532(2)
- 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*, Lewis, Ocvirk, Sorce, Aubert, **Conaboy**, Shapiro, Dawoodbhoy, Teyssier, Yepes, Gottlöber, Ahn, Iliev, Th  lie, MNRAS 516(3)

Conference proceedings

- 2022 *The Reionisation of the Local Universe in the Hestia Suite*, John von Neumann Institute for Computing Symposium, **Conaboy**, Iliev, Libeskind

Supervision

- 2022–present Assistant supervisor to a PhD student, University of Nottingham

Talks

- Feb 2024 Astronomy Colloquium, ICC, Durham
- Nov 2023 TIFR State of the Universe, TIFR, Mumbai (online)
- Nov 2023 Cambridge Galaxies Discussion Group, KICC, Cambridge
- Jun 2023 CLUES Meeting 2023, LMU CAS, Munich
- 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**)

Computing 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)

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