

Natalie B. Hogg

PhD student in cosmology at the ICG, University of Portsmouth

Institute of Cosmology and Gravitation, Email: natalie.hogg@port.ac.uk
University of Portsmouth, Phone: +44 7414 216040
Dennis Sciama Building, Skype: nataliebogg
Burnaby Road,
Portsmouth PO1 3FX,
United Kingdom

Education

- 10/2017 – present **PhD in Cosmology**, University of Portsmouth
Thesis title: Studies of interacting dark energy
Supervisors: Dr Marco Bruni, Prof David Wands, Prof Robert Crittenden
- 09/2013 – 07/2017 **MPhys Astrophysics 1st class hon.**, Aberystwyth University
Master's dissertation: "Dynamical models of dark energy & their background cosmological evolution"
Supervisor: Prof Carsten van de Bruck (University of Sheffield)
-

Publications

Latest evidence for a late-time vacuum – geodesic CDM interaction

Natalie B. Hogg, Marco Bruni, Robert Crittenden, Matteo Martinelli, Simone Peirone
arXiv: 2002.10449, submitted to Physics of the Dark Universe, 2020.

Constraints on the interacting vacuum – geodesic CDM scenario

Matteo Martinelli, Natalie B. Hogg, Simone Peirone, Marco Bruni, David Wands
arXiv: 1902.10694, Monthly Notices of the Royal Astronomical Society, 488, 3, 2019.

Grants, awards and prizes

- | | | |
|---------|---|----------|
| 10/2018 | Short Term Scientific Mission
CANTATA (EU COST Action) travel grant
Used visiting Lorentz Institute, Leiden, November 2018 | EUR 1100 |
| 05/2018 | Long Term Attachment
UK Science and Technology Facilities Council travel grant
Used visiting IFT Madrid, January – June 2020 | GBP 3600 |
| 05/2018 | Santander Mobility Award
University of Portsmouth and Santander Bank travel grant
Used for ICTP Summer School on Cosmology, Trieste, June 2018 | GBP 500 |
| 01/2018 | Short Term Scientific Mission
CANTATA (EU COST Action) travel grant
Used visiting Lorentz Institute, Leiden, March 2018 | EUR 1050 |
| 07/2017 | Breen Prize
Best Master's dissertation in physics, Aberystwyth University | GBP 2000 |

Selected talks

- 04/2020 **Interacting vacuum dark energy**
Cosmology group seminar, Queen Mary University of London
Invited talk
- 12/2019 **Interacting vacuum dark energy**
TEXAS Symposium, University of Portsmouth
Best talk in session
- 12/2019 **Interacting vacuum dark energy**
Cosmology and relativity group seminar, University of Sheffield
Invited talk
- 06/2019 **Testing the standard model of cosmology**
Faculty Research & Innovation conference, University of Portsmouth
Best talk
- 03/2019 **Is the standard model of cosmology wrong?**
26^{ème} Congrès des Doctorants, Institut de Physique du Globe de Paris
Invited talk
- 01/2019 **Interacting vacuum dark energy**
ICG department seminar, University of Portsmouth
- 10/2018 **Interacting vacuum dark energy**
CANTATA meeting, University of Valencia
Invited talk
- 05/2018 **Dark energy: theories and observations**
Research presentation day, British Federation of Women Graduates
Best talk
- 03/2018 **Interacting vacuum dark energy**
Advances in HEP & Cosmology, University of Southampton
- 12/2017 **Interacting dark energy**
Euclid UK Consortium Meeting, University of Portsmouth

Selected schools and conferences

- 04/2019 **A History of the Universe in Redshift**
University of Southampton
Member of organising committee
Session chair for "Early Universe" and networking sessions
- 09/2018 **Data Analysis Workshop**
ICIC, Imperial College London
- 06/2018 **Summer School on Cosmology**
ICTP, Trieste
- 09/2017 **CANTATA COST-Action Summer School**
NTUA (Corfu)

Outreach and public engagement

04/2019	Discover Astrophysics Gave two talks at this University of Portsmouth event for GCSE students
01/2018, 01/2019	Stargazing Live Demonstrator for various activities at this annual ICG and Portsmouth Historic Dockyard public event
03/2018	Night Sky Live Demonstrator for various activities at this public event at Winchester Science Centre
12/2017	Meet a Physicist Participated in this University of Portsmouth event for A Level students

Committees

2018/19	PhD student representative, ICG management committee PhD student representative, University of Portsmouth Faculty of Technology research degrees committee
---------	---

References

Dr Marco Bruni	marco.bruni@port.ac.uk
Dr Matteo Martinelli	matteo.martinelli@uam.es
Prof David Wands	david.wands@port.ac.uk
Prof Carsten van de Bruck	c.vandebruck@sheffield.ac.uk
