

Cosmology at Queen Mary University of London

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London Cosmology Discussion Meeting

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The Cosmology Group at QMUL

The *Cosmology and Relativity Group* has two parts

- in School of Physics and Astronomy – Astronomy Unit
- in School of Mathematical Sciences – Applied Mathematics

for historical reasons: until 2011 Astronomy Unit was in Mathematics.

... most cosmologists are in the AU.

Meet the group

Full time staff:

- In the AU:
 - ▶ Tessa Baker
 - ▶ Phil Bull
 - ▶ Chris Clarkson
 - ▶ Tim Clifton
 - ▶ Karim Malik
 - ▶ David Mulryne
 - ▶ Alkistis Pourtsidou
 - ▶ Will Sutherland

Note: Maths relativity group on AU STFC Consolidated Grant.

Meet the group continued . . .

- *Postdocs:*

- ▶ Julian Adamek (STFC)
- ▶ Pedro Carrilho (STFC)
- ▶ Samir Choudhuri (HERA)
- ▶ Steve Cunnington (STFC)
- ▶ Bill Wright (from January 2020, RS Enhancement)
- ▶ Cat Watkinson (from February 2020, FLF)

Meet the group continued . . .

- *PhD students:*

- ▶ Jorge Fuentes (with Malik)
- ▶ Christopher (“Kit”) Gallagher (with Clifton)
- ▶ Louis Coates (with Clarkson)
- ▶ Rebeca Martinez Carrillo (with Malik)
- ▶ Eline de Weerd (with Clarkson)
- ▶ Paula Soares (with Pourtsidou)
- ▶ Fraser Kennedy (with Bull)
- ▶ Pedro Fernandes (starting November 2019, with Mulryne)

Areas of research

- The physics of the early Universe and models of inflation
- Cosmic Microwave Background anisotropies
- Primordial Black Holes
- Large Scale Structure formation
- Large Scale Structure surveys: *Euclid*, *SKA*, *LSST*, *HERA*
- Dark energy and modified gravity
- Inhomogeneous models of the universe
- Relativistic N -body simulations
- Cosmological perturbation theory at linear order and beyond

Theme: At the moment 2/3 theory – 1/3 survey cosmology: *calculating observable effects, making theoretical predictions, comparing theory with observations.*