

# Daniel Meerburg



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## Research Profile

I am a Senior Research Associate at the University of Cambridge / fixed-term Researcher at the University of Groningen, specialised in the field of cosmology. Topics I have worked on include inflationary model building, cosmic microwave background theory and data analysis, gravitational waves, the epoch of reionisation and 21 cm cosmology.

## Education

- **Ph.D. Astrophysics and Theoretical Physics** September 2011  
University of Amsterdam, Advisors: *Prof. Ralph Wijers and Dr. Jan Pieter van der Schaar* *Cum Laude*
- **Double MSc Astronomy and Theoretical Physics** September 2007  
at *University of Amsterdam Amsterdam, the Netherlands*
- **BA Interdisciplinary studies with major in Physics and Astronomy** September 2004  
at *University of Amsterdam Amsterdam, the Netherlands* *Cum Laude*

## Academic

- **Researcher** Dec 2017 – now  
at *Kapteyn/VSI, University of Groningen, Groningen, the Netherlands*
- **Senior Kavli Fellow** 2017 – now  
at *KICC, University of Cambridge, Cambridge, UK*
- **CITA postdoctoral Fellow** 2014 – 2017  
at *Canadian Institute for theoretical Astrophysics (CITA), Toronto, Canada*
- **Rubicon Fellow and Postdoctoral Fellow** 2011 – 2014  
at *Department of Astrophysical Sciences / Physics, Princeton University, Princeton, USA*

## Fellowships, Grants and Awards

- **Cambridge-LMU Strategic Partnership (E. 15,000)** 2018  
PI: *Prof. Shellard and Prof. Mukhanov*, *Cambridge, UK*
- **NWO VIDI grant (E. 800,000)** 2017  
at *–, Den Haag, the Netherlands*
- **Honorary Scholarship RUG (E. 4,500)** 2016  
at *RUG, Groningen, the Netherlands*
- **Delta ITP visiting grant (E. 9,000)** 2016  
at *University of Amsterdam, Amsterdam, the Netherlands*
- **Honorable mention Christiaan Huygens Prize** 2013  
*Den Haag, the Netherlands*
- **Co-Pi New Frontiers in Cosmology grant (\$ 177,900)** 2012 – 2014  
PI: *David Spergel, Princeton, USA*
- **NWO Rubicon Fellowship (E. 110,000)** 2011 – 2013  
at *Department of Astrophysical Sciences, Princeton University, Princeton, USA*
- **NWO PhD Toptalent Fellowship (E. 180,000)** 2007 – 2011  
*Den Haag, the Netherlands*
- **Co-Pi NWO Van Gogh Grant (E. 10,000)** 2007 – 2011  
PI: *Koenraad Schalm, Den Haag, the Netherlands*
- **MSc Thesis of the year Award (E. 3,000)** 2007  
*Amsterdam, the Netherlands*

## Students and Postdocs

- **Postdoc Will Coulton** 2018 – now  
*University of Cambridge, Cambridge, UK*

- **Part III student David Baker** 2018 – now  
University of Cambridge, Cambridge, UK
- **PhD candidate Benjamin Beringue** 2017 – now  
University of Cambridge, Cambridge, UK
- **Summer students Connor Sheere and Braydon Mon (co-supervision)** 2017 – now  
CITA, Toronto, Canada
- **PhD candidate Adri Duivenvoorden (co-supervision)** 2016 – now  
Oskar Klein Centre, Stockholm, Sweden
- **Master student Darsh Kodwani** 2016 – now  
CITA, Toronto, Canada
- **Summer students Connor Sheere and Harrison Winch (co-supervision)** 2016 – 2017  
CITA, Toronto, Canada
- **Master student Dana Simard** 2014 – 2015  
CITA, Toronto, Canada
- **Summer students Sandy Yuan and Boryana Hadzhiyska (co-supervision)** 2013 – 2014  
Department of Astrophysical Sciences, Princeton University, Princeton, USA
- **Visiting scholar Danu Thung (Amsterdam University College)** 2014  
Department of Astrophysical Sciences, Princeton University, Princeton, USA

## Teaching Activities

- **Princeton Teaching Initiative** 2012 – 2014  
Lecturing and Course Preparation at NJ Prisons, USA
- **Teaching Assistant** 2007 – 2011  
University of Amsterdam, Amsterdam, the Netherlands

## Organization of scientific Meetings

- **Co-organizer: “Neutrinos and (g)astrophysics in large-scale structure”** December 2016  
Website: <http://www.cita.utoronto.ca/~meerburg/workshop>  
CITA, Toronto, Canada
- **Organizer Lorentz workshop: “New challenges for early Universe cosmologists”** August 2013  
Lorentz Center, Leiden, the Netherlands

## Institutional responsibilities

- **Cosmology lunch DAMTP** now – 2017  
DAMTP, Cambridge, UK
- **Visitor committee CITA** 2014 – 2017  
CITA, Toronto, Canada
- **CITA postdoc hiring committee** 2014 – 2017  
CITA, Toronto, Canada
- **Visitor committee Princeton Spring Colloquia** 2013 – 2014  
Department of Astrophysical Sciences, Princeton University, Princeton, USA
- **Cosmology lunch Princeton/Institute for advanced Studies** 2012 – 2014  
Department of Astrophysical Sciences/IAS, Princeton, USA
- **Dutch cosmology meetings** 2007 – 2011  
University of Amsterdam, University of Leiden, University of Utrecht, the Netherlands

## Commission of Trust

- **NASA Astrophysics Theory Program panelist** 2013 and 2016  
MD, USA
- **NASA Earth and Space Science Fellowship Program panelist** 2012  
Department of Astrophysical Sciences, Princeton University, Princeton, USA
- **Reviewer Physical Review D (PRD), Physical Review Letters (PRL), and Journal of Cosmology and Astroparticle physics (JCAP)** 2015 – now

## Collaborations

- **CCAT-p, Simons Observatory, Planck** 2016 – now
- **CMB-S4 working group** 2015 – now

## Coding & Software

**Fortran:** Advanced

**Python, C, IDL:** Novice

**Mathematica, GnuPlot, CAMB, CosmoMC:** Advanced **Healpix, Multinest, Polychord** Intermediate

See e.g. [www.cita.utoronto.ca/~meerburg/code](http://www.cita.utoronto.ca/~meerburg/code)

*IDL and Python mostly used for plotting*

## References



**Prof. David N Spergel**

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