

## Dr. Florian Beutler

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### CONTACT INFORMATION

Institute of Cosmology and Gravitation  
University of Portsmouth  
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PO1 3FX, UK

*Phone:* +44 23 92845 815

*E-mail:* [florian.beutler@port.ac.uk](mailto:florian.beutler@port.ac.uk)

### RESEARCH INTERESTS

- Baryon acoustic oscillations, redshift space distortions, neutrino cosmology, GR corrections in LSS, perturbation theory applications to the large scale structure of the universe, statistical methods in cosmology, primordial non-Gaussianity and primordial features as a probe of inflation.

### PROFESSIONAL EXPERIENCE

**Since 07/2018:** Permanent staff at the University of Portsmouth.

**Since 01/2018:** Royal Society University Research Fellowship (URF).

**06/2017 - 01/2018:** STFC Ernest Rutherford Fellowship, Institute of Cosmology and Gravitation, University of Portsmouth.

**02/2016 - 06/2017:** Research Fellow, 5 year appointment, Institute of Cosmology and Gravitation, University of Portsmouth.

**10/2012 - 02/2016:** Postdoctoral Fellow, 3.5 year appointment, Lawrence Berkeley National Laboratory, Berkeley, CA, USA.

### EDUCATION

**University of Western Australia**, Perth, Australia

PhD, Astrophysics/Cosmology (Graduated September 2012)

- Thesis Topic: Cosmology with the 6-degree Field Galaxy Survey
- Supervisors: Associate Professor Chris Blake, Professor Lister Staveley-Smith, Professor Peter Quinn, Dr. Heath Jones
- Scholarship: IPRS/SIRF scholarship

**University of Heidelberg**, Heidelberg, Germany

Diploma (equiv. to Master), Physics (Graduated October 2008)

- Thesis Topic: Theoretical modeling of hadron production in heavy ion and elementary particle collision
- Supervisor: Professor Johanna Stachel

Bachelor, Computer Science (Graduated October 2008)

Graduation from secondary school, Schorndorf, Germany, July 2003 (Abitur: best student of the year).

### ACADEMIC EXPERIENCE

#### Postdoctoral supervision

**Since 2018:** Line manager of postdoctoral fellow Seshadri Nadathur

**Since 2018:** Line manager of postdoctoral fellow Julian Bautista

**2018 - 2019:** Line manager of postdoctoral fellow Katarina Markovic

**2018 - 2019:** Line manager of postdoctoral fellow Santiago Avila

#### Ph.D. supervision

**Since 2019:** Main supervisor of Ph.D. student Jamie Donald-McCann

**Since 2018:** Main supervisor of Ph.D. student Minas Karamanis

**2015 - 2019** Main supervisor of Ph.D. student Paul Carter

#### Undergraduate supervision

**2014 - 2016:** Co-supervision of undergraduate student Eric Aldabe

**2014:** Co-supervision of undergraduate student Chirag Modi

## Collaboration memberships

**Since 2015:** Member of the [Euclid collaboration](#) - Co-lead of the galaxy clustering working group and the manager of the spectroscopic visibility mask and sample selection.

**Since 2014:** Member of the [DESI collaboration](#) - In 2018 I acquired a personal membership through a grant from the Royal Society, which provided access to DESI for myself, 2 PDRAs and any number of students. This personal membership helped to make the ICG in Portsmouth an institutional member of DESI, which now means that any number of PDRAs at the ICG can have access to DESI. I am a member of the institutional board, the main governing body of the DESI collaboration. I am also the convener of the DESI machine learning discussion group and the co-chair of the Galaxy and Quasar clustering working group.

**Since 2014:** Member of the [eBOSS collaboration](#) - Follow-up experiment of BOSS going to higher redshift in preparation for DESI.

**2012 - 2017:** Member of the Baryon Oscillation Spectroscopic Survey (BOSS) - I was a member of this collaboration until the end of the experiment in 2017. I led the final key science papers on BAO and RSD.

**2009 - 2012:** Member of the 6-degree Field Galaxy Survey (6dFGS)

## Grants

**2019:** ERC starter grant (€1 328 066)

**2018:** Royal Society research grant (£120 000)

**2018:** STFC PATT travel grant for DESI observing (£3000)

**2017:** Royal Society enhancement award (£95 000)

## Awards and Fellowships

**2019:** ICG Achievement award (£2000)

**2018 - 2023:** Royal Society University Research Fellowship (£413 000 – 661 000)

**2018:** Australian Bicentennial Scholarship & Fellowship Award (£1000)

**2017:** STFC Ernest Rutherford Fellowship (£417 000)

**2017:** ICG Achievement award (£2000)

**2012:** UWA publication award - special commendation (AU\$250)

**2012:** UWA Overseas Travel Award (AU\$1850)

**2011:** Australian Society of Astronomy (ASA) travel award (AU\$1000)

**2011:** Graduate Research School Travel (GRST) award (AU\$5000)

**2011:** Australian Society of Astronomy (ASA) meeting, best student poster prize (AU\$100)

**2009 - 2012:** AAO top-up scholarship (AU\$15000)

**2009 - 2012:** SKA top-up scholarship (AU\$18000)

**2009 - 2012:** International Postgraduate Research Scholarship (IPRS)

## Reviewing duties

**Since 2018:** Proposal review for the STFC Consolidated awards

**Since 2018:** Proposal review for the national Fund for Scientific and Technological Development (FONDECYT) of the Chilean National Commission for Scientific and Technological Research (CONICYT)

**Since 2018:** Member of the major and annual review panel of the ICG

**Since 2015:** Referee for Physical Review D

**Since 2014:** Referee for JCAP

**Since 2014:** Referee for “Welt der Physik”

**Since 2012:** Referee for the Astrophysical Journal

**Since 2012:** Referee for MNRAS

## MEDIA

- I co-organized the media release connected to the BOSS DR12 data release, see for example [this article](#).
- Combined with the publication of the BAO analysis in the 6-degree Field Galaxy Survey, I co-organized a media release, which lead to more than 100 print and online articles in about 20 countries.
- Invitation to the TED@Sydney Young talent competition, see talk online [here](#).

## BENTY-FIELDS

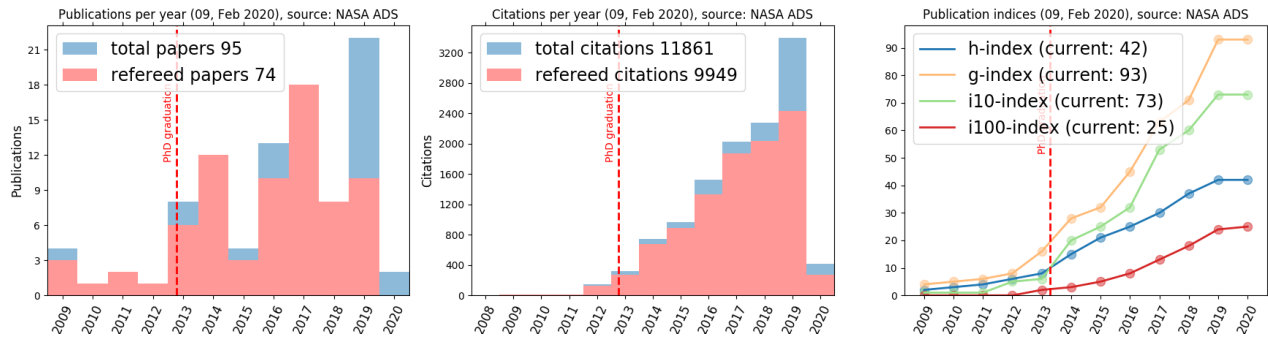
In 2015 I co-founded the academic networking website [benty-fields.com](#) and I am now its main developer. The website offers a journal club organiser, a fast arXiv search engine based on elasticsearch, a user-friendly environment to read arXiv papers and an academic job market. We now have more than 4000 users and host more than 200 journal clubs worldwide.

## SKILLS

Extensive experience with several programming languages including C/C++, Python, root, HTML, openCL, openGL,  $\LaTeX$ , flask, SQL, SQLalchemy, elasticsearch, javascript as well as parallel programming tools like MPI, openMP.

## SELECTED PRESENTATIONS

1. I have been invited to give seminars and colloquia at CEA Saclay (11/2019), CERN (06/2019), Durham University (06/2019), Sussex University (04/2018), John Moore University (05/2017), Stanford University (03/2017), University of Amsterdam (12/2016), EPFL Lausanne (11/2016), MPA Munich (10/2016), DAMTP Cambridge (04/2016), Queen Mary University London (03/2016), UCL London (04/2016), Fermilab (11/2015), SLAC Stanford (02/2014), CfA Boston (02/2012), LBNL Berkeley (02/2012)
2. Invited speaker for the ‘GOLD’ workshop at the Pascal Institute, Paris-Saclay (03/2020)
3. Invited speaker for the ‘Nonlinear evolution of the large scale structure of the Universe: Theory meets Expectations’ conference at the IAP, Paris (05/2016)
4. Invited speaker for the ‘Cosmic flows’ workshop at the Perimeter Institute, Waterloo, Canada (09/2015)
5. Invited lecturer for the Andean Cosmology summer school in Bogota, Columbia (4 days of lectures, 2 hours each, 07/2015)
6. Invited to a lecture series at University of British Columbia, Simon Fraser University, Herzberg Institute and University of Victoria (03/2015)
7. Invited for a review lecture on Baryon Acoustic Oscillations and Redshift Space Distortion, Santa Fe Cosmology Workshop, New Mexico (07/2014)
8. TED@Sydney Young talent competition, Sydney, Australia (05/2012) (<http://www.youtube.com/watch?v=TUorF-2e08k>)
9. PhD summary talk, AAS, Austin (01/2012)



I played a major role in the science contributing to 53 of the 95 publications, the others being collaboration papers where input was through collaboration activity including editing draft papers and contributions to producing the data sets including both management and practical work. h-index = 42 (i.e. 42 papers with > 42 citations), with 25 papers having more than 100 citations (source: NASA ads).

First author publications:

1. *Primordial Features from Linear to Nonlinear Scales*  
**Florian Beutler**, Matteo Biagetti, Daniel Green, Anže Slosar, Benjamin Wallisch  
Physical Review Research, 1, 033209 (2019)
2. *First Measurement of Neutrinos in the BAO Spectrum*  
Daniel Baumann, **Florian Beutler**, Raphael Flauger, Daniel Green, Mariana Vargas-Magaña, Anže Slosar, Benjamin Wallisch, Christophe Yèche  
Nature Physics, 15, 465 (2019)  
**contribution:** I lead the Fourier-space analysis, which forms the main result of this paper.
3. *Interpreting measurements of the anisotropic galaxy power spectrum*  
**Florian Beutler**, Emanuele Castorina, Pierre Zhang  
Journal of Cosmology and Astro-Particle Physics, 2019, 040 (2019)
4. *Constraining the relative velocity effect using the Baryon Oscillation Spectroscopic Survey*  
**Florian Beutler**, Uros Seljak, Zvonimir Vlah  
Monthly Notices of the Royal Astronomical Society, 470, 2723 (2017)
5. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: cosmological analysis of the DR12 galaxy sample*  
Shadab Alam, Metin Ata, Stephen Bailey, **Florian Beutler**, Dmitry Bizyaev, Jonathan A. Blazek, Adam S. Bolton, Joel R. Brownstein +64 co-authors  
Monthly Notices of the Royal Astronomical Society, 470, 2617 (2017) (**746 citations** on NASA ADS)  
**contribution:** I contributed the Fourier-space BAO constraints, which this paper combines with the configuration-space results leading to the final BOSS DR12 BAO constraints. I also contributed the Fourier-space RSD constraints, which this paper combines with three other RSD studies of this datasets for the final BOSS DR12 RSD result.
6. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: Anisotropic galaxy clustering in Fourier-space*  
**Florian Beutler**, Hee-Jong Seo, Shun Saito, Chia-Hsun Chuang, Antonio J. Cuesta, Daniel J. Eisenstein, Héctor Gil-Marín, Jan Niklas Grieb +15 co-authors  
Monthly Notices of the Royal Astronomical Society, 466, 2242 (2017)
7. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: Baryon Acoustic Oscillations in Fourier-space*  
**Florian Beutler**, Hee-Jong Seo, Ashley J. Ross, Patrick McDonald, Shun Saito, Adam S. Bolton, Joel R. Brownstein, Chia-Hsun Chuang +21 co-authors  
Monthly Notices of the Royal Astronomical Society, 464, 3409 (2017)

8. *The BOSS-WiggleZ overlap region I: Baryon Acoustic Oscillations*  
**Florian Beutler**, Chris Blake, Jun Koda, Felipe Marin, Hee-Jong Seo, Antonio J. Cuesta, Donald P. Schneider  
[Monthly Notices of the Royal Astronomical Society](#), 455, 3230 (2016)
9. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: Signs of neutrino mass in current cosmological datasets*  
**Florian Beutler**, Shun Saito, Joel R. Brownstein, Chia-Hsun Chuang, Antonio J. Cuesta, Will J. Percival, Ashley J. Ross, Nicholas P. Ross +7 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 444, 3501 (2014) (**105 citations** on NASA ADS)
10. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: Testing gravity with redshift-space distortions using the power spectrum multipoles*  
**Florian Beutler**, Shun Saito, Hee-Jong Seo, Jon Brinkmann, Kyle S. Dawson, Daniel J. Eisenstein, Andreu Font-Ribera, Shirley Ho +10 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 443, 1065 (2014) (**222 citations** on NASA ADS)
11. *Cosmology with the 6-degree Field Galaxy Survey*  
**Florian Beutler**  
[\[arXiv:1303.3302\]](#)
12. *The 6dF Galaxy Survey: Dependence of halo occupation on stellar mass*  
**Florian Beutler**, Chris Blake, Matthew Colless, D. Heath Jones, Lister Staveley-Smith, Lachlan Campbell, Quentin Parker, Will Saunders +1 co-author  
[Monthly Notices of the Royal Astronomical Society](#), 429, 3604 (2013)
13. *The 6dF Galaxy Survey:  $z \approx 0$  measurement of the growth rate and  $\sigma_8$*   
**Florian Beutler**, Chris Blake, Matthew Colless, D. Heath Jones, Lister Staveley-Smith, Gregory B. Poole, Lachlan Campbell, Quentin Parker +2 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 423, 3430 (2012) (**318 citations** on NASA ADS)
14. *The 6dF Galaxy Survey: Baryon Acoustic Oscillations and the Local Hubble Constant*  
**Florian Beutler**, Chris Blake, Matthew Colless, D. Heath Jones, Lister Staveley-Smith, Lachlan Campbell, Quentin Parker, Will Saunders +1 co-author  
[Monthly Notices of the Royal Astronomical Society](#), 416, 3017 (2011) (**1221 citations** on NASA ADS)
15. *The canonical partition function for relativistic hadron gases*  
**F. Beutler**, A. Andronic, P. Braun-Munzinger, K. Redlich, J. Stachel  
[European Physical Journal C](#), 67, 439 (2010)
16. *Thermal description of hadron production in  $e+e-$  collisions*  
**Florian Beutler**  
[\[arXiv:0904.2885\]](#)
17. *Statistical hadronization of heavy flavor quarks in elementary collisions: successes and failures*  
A. Andronic, **F. Beutler**, P. Braun-Munzinger, K. Redlich, J. Stachel  
[Physics Letters B](#), 678, 350 (2009)  
**contribution:** This publication is based on my Diploma thesis and I contributed 95% of the science content and 50% of the paper writing.
18. *Thermal description of hadron production in  $e+e-$  collisions revisited*  
A. Andronic, **F. Beutler**, P. Braun-Munzinger, K. Redlich, J. Stachel  
[Physics Letters B](#), 675, 312 (2009)  
**contribution:** This publication is based on my Diploma thesis and I contributed 95% of the science content and 50% of the paper writing.

Further publications:

1. *Testing low-redshift cosmic acceleration with large-scale structure*  
Seshadri Nadathur, Will J. Percival, **Florian Beutler**, Hans Winther  
[\[arXiv:2001.11044\]](#)
2. *Prospects for Fundamental Physics with LISA*  
E. Barausse, E. Berti, T. Hertog, S. Hughes, P. Jetzer, P. Pani, T. Sotiriou, N. Tamanini +314 co-authors  
[\[arXiv:2001.09793\]](#)
3. *The Sixteenth Data Release of the Sloan Digital Sky Surveys: First Release from the APOGEE-2 Southern Survey and Full Release of eBOSS Spectra*  
Romina Ahumada, Carlos Allende Prieto, Andres Almeida, Friedrich Anders, Scott F. Anderson, Brett H. Andrews, Borja Anguiano, Riccardo Arcodia +305 co-authors  
[\[arXiv:1912.02905\]](#)
4. *Efficient Cosmological Analysis of the SDSS/BOSS data from the Effective Field Theory of Large-Scale Structure*  
Thomas Colas, Guido D'Amico, Leonardo Senatore, Pierre Zhang, **Florian Beutler**  
[\[arXiv:1909.07951\]](#)
5. *The Cosmological Analysis of the SDSS/BOSS data from the Effective Field Theory of Large-Scale Structure*  
Guido D'Amico, Jérôme Gleyzes, Nickolas Kokron, Dida Markovic, Leonardo Senatore, Pierre Zhang, **Florian Beutler**, Héctor Gil-Marín  
[\[arXiv:1909.05271\]](#)
6. *Redshift-weighted constraints on primordial non-Gaussianity from the clustering of the eBOSS DR14 quasars in Fourier space*  
Emanuele Castorina, Nick Hand, Uros Seljak, **Florian Beutler**, Chia-Hsun Chuang, Cheng Zhao, Héctor Gil-Marín, Will J. Percival +8 co-authors  
*Journal of Cosmology and Astroparticle Physics*, 2019, 010 (2019)
7. *Perturbation theory approach to predict the covariance matrices of the galaxy power spectrum and bispectrum in redshift space*  
Naonori S. Sugiyama, Shun Saito, **Florian Beutler**, Hee-Jong Seo  
[\[arXiv:1908.06234\]](#)
8. *The Dark Energy Spectroscopic Instrument (DESI)*  
Michael E. Levi, Lori E. Allen, Anand Raichoor, Charles Baltay, Segev BenZvi, **Florian Beutler**, Adam Bolton, Francisco J. Castander +37 co-authors  
[\[arXiv:1907.10688\]](#)
9. *The Impact of the Fiducial Cosmology Assumption on BAO Cosmological Parameter Inference*  
Paul Carter, **Florian Beutler**, Will J. Percival, Joseph DeRose, Risa H. Wechsler, Cheng Zhao  
[\[arXiv:1906.03035\]](#)
10. *Assessing non-linear models for galaxy clustering II: model selection and forecasts for Stage IV surveys*  
Benjamin Bose, Alkistis Pourtsidou, Katarina Marković, **Florian Beutler**  
[\[arXiv:1905.05122\]](#)
11. *Likelihood Non-Gaussianity in Large-Scale Structure Analyses*  
ChangHoon Hahn, **Florian Beutler**, Manodeep Sinha, Andreas Berlind, Shirley Ho, David W. Hogg  
*Monthly Notices of the Royal Astronomical Society*, 485, 2956 (2019)
12. *Overview of the DESI Legacy Imaging Surveys*  
Arjun Dey, David J. Schlegel, Dustin Lang, Robert Blum, Kaylan Burleigh, Xiaohui Fan, Joseph R. Findlay, Doug Finkbeiner +152 co-authors  
*The Astronomical Journal*, 157, 168 (2019)



13. *Inflation and Dark Energy from spectroscopy at  $z > 2$*   
Simone Ferraro, Michael J. Wilson, Muntazir Abidi, David Alonso, Behzad Ansarinejad, Robert Armstrong, Jacobo Asorey, Arturo Avelino +135 co-authors  
[\[arXiv:1903.09208\]](#)
14. *Messengers from the Early Universe: Cosmic Neutrinos and Other Light Relics*  
Daniel Green, Mustafa A. Amin, Joel Meyers, Benjamin Wallisch, Kevork N. Abazajian, Muntazir Abidi, Peter Adshead, Zeeshan Ahmed +131 co-authors  
[\[arXiv:1903.04763\]](#)
15. *Primordial Non-Gaussianity*  
P. Daniel Meerburg, Daniel Green, Muntazir Abidi, Mustafa A. Amin, Peter Adshead, Zeeshan Ahmed, David Alonso, Behzad Ansarinejad +170 co-authors  
[\[arXiv:1903.04409\]](#)
16. *Dark Matter Science in the Era of LSST*  
Keith Bechtol, Alex Drlica-Wagner, Kevork N. Abazajian, Muntazir Abidi, Susmita Adhikari, Yacine Ali-Haïmoud, James Annis, Behzad Ansarinejad +172 co-authors  
[\[arXiv:1903.04425\]](#)
17. *Science from an Ultra-Deep, High-Resolution Millimeter-Wave Survey*  
Neelima Sehgal, Ho Nam Nguyen, Joel Meyers, Moritz Munchmeyer, Tony Mroczkowski, Luca Di Mascolo, Eric Baxter, Francis-Yan Cyr-Racine +61 co-authors  
[\[arXiv:1903.03263\]](#)
18. *The clustering of the SDSS-IV extended Baryon Oscillation Spectroscopic Survey DR14 quasar sample: measuring the evolution of the growth rate using redshift space distortions between redshift 0.8 and 2.2*  
Rossana Ruggeri, Will J. Percival, Hector Gil Marin, **Florian Beutler**, Eva Maria Mueller, Fangzhou Zhu, Nikhil Padmanabhan, Gong-Bo Zhao +11 co-authors  
Monthly Notices of the Royal Astronomical Society, 483, 3878 (2019)
19. *A complete FFT-based decomposition formalism for the redshift-space bispectrum*  
Naonori S. Sugiyama, Shun Saito, **Florian Beutler**, Hee-Jong Seo  
Monthly Notices of the Royal Astronomical Society, 484, 364 (2019)
20. *The Fifteenth Data Release of the Sloan Digital Sky Surveys: First Release of MaNGA Derived Quantities, Data Visualization Tools and Stellar Library*  
D. S. Aguado, Romina Ahumada, Andres Almeida, Scott F. Anderson, Brett H. Andrews, Borja Anguiano, Erik Aquino Ortiz, Alfonso Aragon-Salamanca +226 co-authors  
The Astrophysical Journal Supplement Series, 240, 23 (2019)
21. *The clustering of the SDSS-IV extended Baryon Oscillation Spectroscopic Survey DR14 quasar sample: a tomographic measurement of cosmic structure growth and expansion rate based on optimal redshift weights*  
Gong-Bo Zhao, Yuting Wang, Shun Saito, Héctor Gil-Marín, Will J. Percival, Dandan Wang, Chia-Hsun Chuang, Rossana Ruggeri +23 co-authors  
Monthly Notices of the Royal Astronomical Society, 482, 3497 (2019)
22. *Low Redshift Baryon Acoustic Oscillation Measurement from the Reconstructed 6-degree Field Galaxy Survey*  
Paul Carter, **Florian Beutler**, Will J. Percival, Chris Blake, Jun Koda, Ashley J. Ross  
Monthly Notices of the Royal Astronomical Society, 481, 2371 (2018)
23. *nbodykit: an open-source, massively parallel toolkit for large-scale structure*  
Nick Hand, Yu Feng, **Florian Beutler**, Yin Li, Chirag Modi, Uros Seljak, Zachary Slepian  
The Astronomical Journal, 156, 160 (2018)
24. *The clustering of the SDSS-IV extended Baryon Oscillation Spectroscopic Survey DR14 quasar sample: Measuring the anisotropic Baryon Acoustic Oscillations with redshift weights*  
Fangzhou Zhu, Nikhil Padmanabhan, Ashley J. Ross, Martin White, Will J. Percival, Rossana Ruggeri, Gong-bo Zhao, Dandan Wang +12 co-authors  
Monthly Notices of the Royal Astronomical Society, 480, 1096 (2018)

25. *Theoretical Systematics of Future Baryon Acoustic Oscillation Surveys*  
Zhejie Ding, Hee-Jong Seo, Zvonimir Vlah, Yu Feng, Marcel Schmittfull, **Florian Beutler**  
Monthly Notices of the Royal Astronomical Society, 479, 1021 (2018)
26. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: theoretical systematics and Baryon Acoustic Oscillations in the galaxy correlation function*  
Mariana Vargas-Magaña, Shirley Ho, Antonio J. Cuesta, Ross O’Connell, Ashley J. Ross, Daniel J. Eisenstein, Will J. Percival, Jan Niklas Grieb +13 co-authors  
Monthly Notices of the Royal Astronomical Society, 477, 1153 (2018)
27. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: constraining modified gravity*  
Eva-Maria Mueller, Will Percival, Eric Linder, Shadab Alam, Gong-Bo Zhao, Ariel G. Sánchez, **Florian Beutler**  
Monthly Notices of the Royal Astronomical Society, 475, 2122 (2018)
28. *The Fourteenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the extended Baryon Oscillation Spectroscopic Survey and from the second phase of the Apache Point Observatory Galactic Evolution Experiment*  
Bela Abolfathi, D. S. Aguado, Gabriela Aguilar, Carlos Allende Prieto, Andres Almeida, Tonima Tasnim Ananna, Friedrich Anders, Scott F. Anderson +340 co-authors  
The Astrophysical Journal Supplement Series, 235, 42 (2018) (**463 citations** on NASA ADS)
29. *The clustering of the SDSS-IV extended Baryon Oscillation Spectroscopic Survey DR14 quasar sample: First measurement of Baryon Acoustic Oscillations between redshift 0.8 and 2.2*  
Metin Ata, Falk Baumgarten, Julian Bautista, **Florian Beutler**, Dmitry Bizyaev, Michael R. Blanton, Jonathan A. Blazek, Adam S. Bolton +55 co-authors  
Monthly Notices of the Royal Astronomical Society, 473, 4773 (2018) (**142 citations** on NASA ADS)
30. *Imprints of Reionization in Galaxy Clustering*  
Fabian Schmidt, **Florian Beutler**  
Physical Review D, 96, 083533 (2017)
31. *Extending the modeling of the anisotropic galaxy power spectrum to  $k = 0.4 \text{ hMpc}^{-1}$*   
Nick Hand, Uros Seljak, **Florian Beutler**, Zvonimir Vlah  
Journal of Cosmology and Astro-Particle Physics, 2017, 009 (2017)
32. *The Clustering of Galaxies in the Completed SDSS-III Baryon Oscillation Spectroscopic Survey: single-probe measurements from DR12 galaxy clustering – towards an accurate model*  
Chia-Hsun Chuang, Marcos Pellejero-Ibanez, Sergio Rodríguez-Torres, Ashley J. Ross, Gong-bo Zhao, Yuting Wang, Antonio J. Cuesta, J. A. Rubiño-Martín +22 co-authors  
Monthly Notices of the Royal Astronomical Society, 471, 2370 (2017)
33. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: On the measurement of growth rate using galaxy correlation functions*  
Siddharth Satpathy, Shadab Alam, Shirley Ho, Martin White, Neta A. Bahcall, **Florian Beutler**, Joel R. Brownstein, Chia-Hsun Chuang +11 co-authors  
Monthly Notices of the Royal Astronomical Society, 469, 1369 (2017)
34. *Dynamical dark energy in light of the latest observations*  
Gong-Bo Zhao, Marco Raveri, Levon Pogosian, Yuting Wang, Robert G. Crittenden, Will J. Handley, Will J. Percival, **Florian Beutler** +18 co-authors  
Nature Astronomy, 1, 627 (2017) (**193 citations** on NASA ADS)
35. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: Angular clustering tomography and its cosmological implications*  
Salvador Salazar-Albornoz, Ariel G. Sanchez, Jan Niklas Grieb, Martin Crocce, Roman Scoccimarro, Shadab Alam, **Florian Beutler**, Joel R. Brownstein +12 co-authors  
Monthly Notices of the Royal Astronomical Society, 468, 2938 (2017)



36. *Sloan Digital Sky Survey IV: Mapping the Milky Way, Nearby Galaxies, and the Distant Universe*  
Michael R. Blanton, Matthew A. Bershady, Bela Abolfathi, Franco D. Albareti, Carlos Allende Prieto, Andres Almeida, Javier Alonso-García, Friedrich Anders +345 co-authors  
[The Astronomical Journal](#), 154, 28 (2017) (**375 citations** on NASA ADS)
37. *The Clustering of Galaxies in the Completed SDSS-III Baryon Oscillation Spectroscopic Survey: Cosmic Flows and Cosmic Web from Luminous Red Galaxies*  
Metin Ata, Francisco-Shu Kitaura, Chia-Hsun Chuang, Sergio Rodríguez-Torres, Raul E. Angulo, Simone Ferraro, Hector Gil-Marín, Patrick McDonald +26 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 467, 3993 (2017)
38. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: Cosmological implications of the Fourier space wedges of the final sample*  
Jan Niklas Grieb, Ariel G. Sánchez, Salvador Salazar-Albornoz, Román Scoccimarro, Martín Crocce, Claudio Dalla Vecchia, Francesco Montesano, Héctor Gil-Marín +20 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 467, 2085 (2017)
39. *Consistency of the growth rate in different environments with the 6dF Galaxy Survey: measurement of the void-galaxy and galaxy-galaxy correlation functions*  
Ixandra Achitouv, Chris Blake, Paul Carter, Jun Koda, **Florian Beutler**  
[Physical Review D](#), 95, 083502 (2017)
40. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: tomographic BAO analysis of DR12 combined sample in Fourier space*  
Gong-Bo Zhao, Yuting Wang, Shun Saito, Dandan Wang, Ashley J. Ross, **Florian Beutler**, Jan Niklas Grieb, Chia-Hsun Chuang +20 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 466, 762 (2017)
41. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: combining correlated Gaussian posterior distributions*  
Ariel G. Sanchez, Jan Niklas Grieb, Salvador Salazar-Albornoz, Shadab Alam, **Florian Beutler**, Ashley J. Ross, Joel R. Brownstein, Chia-Hsun Chuang +12 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 464, 1493 (2017)
42. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: cosmological implications of the configuration-space clustering wedges*  
Ariel G. Sanchez, Roman Scoccimarro, Martin Crocce, Jan Niklas Grieb, Salvador Salazar-Albornoz, Claudio DallaVecchia, Martha Lippich, **Florian Beutler** +16 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 464, 1640 (2017)
43. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: Observational systematics and baryon acoustic oscillations in the correlation function*  
Ashley J. Ross, **Florian Beutler**, Chia-Hsun Chuang, Marcos Pellejero-Ibanez, Hee-Jong Seo, Mariana Vargas-Magana, Antonio J. Cuesta, Will J. Percival +22 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 464, 1168 (2017)
44. *The DESI Experiment Part I: Science, Targeting, and Survey Design*  
[DESI Collaboration], Amir Aghamousa, Jessica Aguilar, Steve Ahlen, Shadab Alam, Lori E. Allen, Carlos Allende Prieto, James Annis +285 co-authors  
[\[arXiv:1611.00036\]](#) (**479 citations** on NASA ADS)
45. *The DESI Experiment Part II: Instrument Design*  
[DESI Collaboration], Amir Aghamousa, Jessica Aguilar, Steve Ahlen, Shadab Alam, Lori E. Allen, Carlos Allende Prieto, James Annis +285 co-authors  
[\[arXiv:1611.00037\]](#)
46. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: single-probe measurements from CMASS anisotropic galaxy clustering*  
Chia-Hsun Chuang, Francisco Prada, Marcos Pellejero-Ibanez, **Florian Beutler**, Antonio J. Cuesta, Daniel J. Eisenstein, Stephanie Escoffier, Shirley Ho +18 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 461, 3781 (2016)

47. *Modeling the reconstructed BAO in Fourier space*  
Hee-Jong Seo, **Florian Beutler**, Ashley J. Ross, Shun Saito  
[Monthly Notices of the Royal Astronomical Society](#), 460, 2453 (2016)
48. *The clustering of galaxies in the completed SDSS-III Baryon Oscillation Spectroscopic Survey: double-probe measurements from BOSS galaxy clustering & Planck data – towards an analysis without informative priors*  
Marcos Pellejero-Ibanez, Chia-Hsun Chuang, J. A. Rubiño-Martín, Antonio J. Cuesta, Yuting Wang, Gong-bo Zhao, Ashley J. Ross, Sergio Rodríguez-Torres +23 co-authors  
[\[arXiv:1607.03152\]](#)
49. *Fast and accurate mock catalogue generation for low-mass galaxies*  
Jun Koda, Chris Blake, **Florian Beutler**, Eyal Kazin, Felipe Marin  
[Monthly Notices of the Royal Astronomical Society](#), 459, 2118 (2016)
50. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: Baryon Acoustic Oscillations in the correlation function of LOWZ and CMASS galaxies in Data Release 12*  
Antonio J. Cuesta, Mariana Vargas-Magaña, **Florian Beutler**, Adam S. Bolton, Joel R. Brownstein, Daniel J. Eisenstein, Héctor Gil-Marín, Shirley Ho +15 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 457, 1770 (2016) (**121 citations** on NASA ADS)
51. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: mock galaxy catalogues for the BOSS Final Data Release*  
Francisco-Shu Kitaura, Sergio Rodríguez-Torres, Chia-Hsun Chuang, Cheng Zhao, Francisco Prada, Hector Gil-Marín, Hong Guo, Gustavo Yepes +15 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 456, 4156 (2016)
52. *The BOSS-WiggleZ overlap region II: dependence of cosmic growth on galaxy type*  
Felipe A. Marín, **Florian Beutler**, Chris Blake, Jun Koda, Eyal Kazin, Donald P. Schneider  
[Monthly Notices of the Royal Astronomical Society](#), 455, 4046 (2016)
53. *The SDSS-IV extended Baryon Oscillation Spectroscopic Survey: Overview and Early Data*  
Kyle S. Dawson, Jean-Paul Kneib, Will J. Percival, Shadab Alam, Franco D. Albareti, Scott F. Anderson, Eric Armengaud, Eric Aubourg +138 co-authors  
[The Astronomical Journal](#), 151, 44 (2016) (**294 citations** on NASA ADS)
54. *The 6dF Galaxy Survey: Bulk Flows on  $50 - 70h^{-1}$  Mpc scales*  
Morag I. Scrimgeour, Tamara M. Davis, Chris Blake, Lister Staveley-Smith, Christina Magoulas, Christopher M. Springob, **Florian Beutler**, Matthew Colless +7 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 455, 386 (2016)
55. *SDSS-III Baryon Oscillation Spectroscopic Survey Data Release 12: galaxy target selection and large scale structure catalogues*  
Beth Reid, Shirley Ho, Nikhil Padmanabhan, Will J. Percival, Jeremy Tinker, Rita Tojeiro, Martin White, Daniel J. Eisenstein +34 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 455, 1553 (2016) (**169 citations** on NASA ADS)
56. *The large-scale 3-point correlation function of the SDSS BOSS DR12 CMASS galaxies*  
Zachary Slepian, Daniel J. Eisenstein, **Florian Beutler**, Antonio J. Cuesta, Jian Ge, Héctor Gil-Marín, Shirley Ho, Francisco-Shu Kitaura +10 co-authors  
[\[arXiv:1512.02231\]](#)
57. *Eulerian BAO Reconstructions and N-Point Statistics*  
Marcel Schmittfull, Yu Feng, **Florian Beutler**, Blake Sherwin, Man Yat Chu  
[Physical Review D](#), 92, 123522 (2015)
58. *Cosmological implications of baryon acoustic oscillation (BAO) measurements*  
Éric Aubourg, Stephen Bailey, Julian E. Bautista, **Florian Beutler**, Vaishali Bhardwaj, Dmitry Bizyaev, Michael Blanton, Michael Blomqvist +85 co-authors  
[Physical Review D](#), 92, 123516 (2015) (**344 citations** on NASA ADS)

59. *The Eleventh and Twelfth Data Releases of the Sloan Digital Sky Survey: Final Data from SDSS-III*  
Shadab Alam, Franco D. Albareti, Carlos Allende Prieto, F. Anders, Scott F. Anderson, Brett H. Andrews,  
Eric Armengaud, Éric Aubourg +266 co-authors  
[The Astrophysical Journal Supplement Series](#), 219, 12 (2015) (**1213 citations** on NASA ADS)
60. *The 6dF Galaxy Survey: Fundamental Plane Data*  
Lachlan A. Campbell, John R. Lucey, Matthew Colless, D. Heath Jones, Christopher M. Springob,  
Christina Magoulas, Robert N. Proctor, Jeremy R. Mould +8 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 443, 1231 (2014)
61. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: Baryon Acoustic Oscillations in the Data Release 10 and 11 galaxy samples*  
Lauren Anderson, Eric Aubourg, Stephen Bailey, **Florian Beutler**, Vaishali Bhardwaj, Michael Blanton,  
Adam S. Bolton, J. Brinkmann +57 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 441, 24 (2014) (**923 citations** on NASA ADS)
62. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: cosmological implications of the full shape of the clustering wedges in the data release 10 and 11 galaxy samples*  
Ariel G. Sanchez, Francesco Montesano, Eyal A. Kazin, Eric Aubourg, **Florian Beutler**, Jon Brinkmann,  
Joel R. Brownstein, Antonio J. Cuesta +20 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 440, 2692 (2014) (**104 citations** on NASA ADS)
63. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: galaxy clustering measurements in the low redshift sample of Data Release 11*  
Rita Tojeiro, Ashley J. Ross, Angela Burden, Lado Samushia, Marc Manera, Will J. Percival, **Florian Beutler**, Antonio J. Cuesta +14 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 440, 2222 (2014)
64. *Quasar-Lyman- $\alpha$  Forest Cross-Correlation from BOSS DR11 : Baryon Acoustic Oscillations*  
Andreu Font-Ribera, David Kirkby, Nicolas Busca, Jordi Miralda-Escudé, Nicholas P. Ross, Anže Slosar,  
Jim Rich, Éric Aubourg +35 co-authors  
[Journal of Cosmology and Astro-Particle Physics](#), 2014, 027 (2014) (**261 citations** on NASA ADS)
65. *The Clustering of Galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: Including covariance matrix errors*  
Will J. Percival, Ashley J. Ross, Ariel G. Sanchez, Lado Samushia, Angela Burden, Robert Crittenden,  
Antonio J. Cuesta, Mariana Vargas Magana +14 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 439, 2531 (2014) (**146 citations** on NASA ADS)
66. *The Clustering of Galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey (BOSS): measuring growth rate and geometry with anisotropic clustering*  
Lado Samushia, Beth A. Reid, Martin White, Will J. Percival, Antonio J. Cuesta, Gong-Bo Zhao, Ashley J. Ross, Marc Manera +22 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 439, 3504 (2014) (**220 citations** on NASA ADS)
67. *The Tenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-III Apache Point Observatory Galactic Evolution Experiment*  
Christopher P. Ahn, Rachael Alexandroff, Carlos Allende Prieto, Friedrich Anders, Scott F. Anderson,  
Timothy Anderton, Brett H. Andrews, Éric Aubourg +227 co-authors  
[The Astrophysical Journal Supplement Series](#), 211, 17 (2014) (**741 citations** on NASA ADS)
68. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: Measuring  $D_A$  and  $H$  at  $z=0.57$  from the Baryon Acoustic Peak in the Data Release 9 Spectroscopic Galaxy Sample*  
Lauren Anderson, Eric Aubourg, Stephen Bailey, **Florian Beutler**, Adam S. Bolton, J. Brinkmann, Joel R. Brownstein, Chia-Hsun Chuang +30 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 439, 83 (2014) (**161 citations** on NASA ADS)
69. *The Clustering of Galaxies in the SDSS-III DR10 Baryon Oscillation Spectroscopic Survey: No Detectable Colour Dependence of Distance Scale or Growth Rate Measurements*  
Ashley J. Ross, Lado Samushia, Angela Burden, Will J. Percival, Rita Tojeiro, Marc Manera, **Florian Beutler**, J. Brinkmann +22 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 437, 1109 (2014)

70. *The Clustering of Galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: Measuring  $H(z)$  and  $D_A(z)$  at  $z = 0.57$  with Clustering Wedges*  
Eyal A. Kazin, Ariel G. Sanchez, Antonio J. Cuesta, **Florian Beutler**, Chia-Hsun Chuang, Daniel J. Eisenstein, Marc Manera, Nikhil Padmanabhan +13 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 435, 64 (2013)
71. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: single-probe measurements and the strong power of normalized growth rate on constraining dark energy*  
Chia-Hsun Chuang, Francisco Prada, Antonio J. Cuesta, Daniel J. Eisenstein, Eyal Kazin, Nikhil Padmanabhan, Ariel G. Sanchez, Xiaoying Xu +8 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 433, 3559 (2013)
72. *The clustering of galaxies in the SDSS-III Baryon Oscillation Spectroscopic Survey: cosmological constraints from the full shape of the clustering wedges*  
Ariel G. Sanchez, Eyal A. Kazin, **Florian Beutler**, Chia-Hsun Chuang, Antonio J. Cuesta, Daniel J. Eisenstein, Marc Manera, Francesco Montesano +14 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 433, 1202 (2013)
73. *The Clustering Of Galaxies Around Radio-Loud AGNs*  
Hauke Worpel, Michael J. I. Brown, D. Heath Jones, David J. E. Floyd, **Florian Beutler**  
[The Astrophysical Journal](#), 772, 64 (2013)
74. *A combined measurement of cosmic growth and expansion from clusters of galaxies, the CMB and galaxy clustering*  
David Rapetti, Chris Blake, Steven W. Allen, Adam Mantz, David Parkinson, **Florian Beutler**  
[Monthly Notices of the Royal Astronomical Society](#), 432, 973 (2013)
75. *Measuring  $H_0$  from the 6dF Galaxy Survey and future low-redshift surveys*  
Matthew Colless, **Florian Beutler**, Chris Blake  
[Advancing the Physics of Cosmic Distances](#), 289, 319 (2013)
76. *The WiggleZ Dark Energy Survey: mapping the distance-redshift relation with baryon acoustic oscillations*  
Chris Blake, Eyal Kazin, **Florian Beutler**, Tamara Davis, David Parkinson, Sarah Brough, Matthew Colless, Carlos Contreras +21 co-authors  
[Monthly Notices of the Royal Astronomical Society](#), 418, 1707 (2011) (**652 citations** on NASA ADS)
77. *Canonical Statistical Model and hadron production in  $e^+e^-$  annihilations*  
K. Redlich, A. Andronic, **F. Beutler**, P. Braun-Munzinger, J. Stachel  
[Journal of Physics G Nuclear Physics](#), 36, 064021 (2009)