

Publication list

I have co-authored 81 scientific articles intended for peer-reviewed publication, including 7 first-author papers. They have been cited more than 3,800 times and have an h -index of 35, with more than 300 citations on my first-author papers. My publications include three companion reviews on galaxy alignments written for a special issue of Space Science Reviews (B. Joachimi et al. 2015, A. Kiessling et al. 2015, D. Kirk et al. 2015). The full list of publications can be accessed at [this url](#). I also wrote an invited ‘News & Views’ article for the 4 July 2017 edition of Nature Astronomy, accessible [here](#). This document is maintained live on [github](#).

First-Author Papers

7. **C. Sifón**, R. Herbonnet, H. Hoekstra, R. F. J. van der Burg, M. Viola, “**The Galaxy-Subhalo Connection in Low-Redshift Galaxy Clusters from Weak Gravitational Lensing**”, 2018, [MNRAS](#), **478**, 1244 [[arXiv](#)]
6. **C. Sifón**, R. F. J. van der Burg, H. Hoekstra, A. Muzzin, R. Herbonnet, “**A First Constraint on the Average Mass of Ultra Diffuse Galaxies from Weak Gravitational Lensing**”, 2018, [MNRAS](#), **473**, 3747 [[arXiv](#)]
5. **C. Sifón** et al. (25 co-authors), “**The Atacama Cosmology Telescope: Dynamical Masses for 44 SZ-Selected Galaxy Clusters over 755 Square Degrees**”, 2016, [MNRAS](#), **461**, 248 [[arXiv](#)]
4. **C. Sifón** et al. (26 co-authors), “**The Masses of Satellites in GAMA Galaxy Groups from 100 Square Degrees of KiDS Weak Lensing Data**”, 2015, [MNRAS](#), **454**, 3938 [[arXiv](#)]
3. **C. Sifón**, H. Hoekstra, M. Cacciato, M. Viola, F. Köhlinger, R. F. J. van der Burg, D. J. Sand, M. L. Graham, “**Constraints on the Alignments of Galaxies in Galaxy Clusters from $\sim 14,000$ Spectroscopic Members**”, 2015, [A&A](#), **575**, A48 [[arXiv](#)]
2. **C. Sifón**, F. Menanteau, J. P. Hughes, M. Carrasco, L. F. Barrientos, “**Strong Lensing Analysis of PLCK G004.5–19.5, a Planck-Discovered Cluster Hosting a Radio Relic at $z = 0.52$** ”, 2014, [A&A](#), **562**, A43 [[arXiv](#)]
1. **C. Sifón** et al. (36 co-authors), “**The Atacama Cosmology Telescope: Dynamical Masses and Scaling Relations for a Sample of Massive Sunyaev-Zel’dovich Effect Selected Galaxy Clusters**”, 2013, [ApJ](#), **772**, 25 [[arXiv](#)]

Major Contributor Papers

14. M. Hilton, **C. Sifón**, et al. (133 co-authors), “**The Atacama Cosmology Telescope: a Catalog of >4000 Sunyaev-Zel’dovich Galaxy Clusters**”, 2020, [arXiv:2009.11043](#), accepted for publication in [ApJS](#)
13. M. S. Madhavacheril, **C. Sifón**, et al. (61 co-authors), “**The Atacama Cosmology Telescope: Weighing Distant Clusters with the Most Ancient Light**”, 2020, [ApJL](#), **903**, 13 [[arXiv](#)]
12. R. Herbonnet, **C. Sifón**, H. Hoekstra, Y. Bahé, R. F. J. van der Burg, J.-B. Melin, A. von der Linden, D. Sand, S. Kay, D. Barnes, “**CCCP and MENeCS: (Updated) Weak-Lensing Masses for 100 Galaxy Clusters**”, 2020, [MNRAS](#), **497**, 4684 [[arXiv](#)]
11. M. Hilton, M. Hasselfield, **C. Sifón**, et al. (43 co-authors), “**The Atacama Cosmology Telescope: The Two-Season ACTPol Sunyaev-Zel’dovich Effect Selected Cluster Catalog**”, 2018, [ApJS](#), **235**, 20 [[arXiv](#)]
10. J. G. Albert, **C. Sifón**, A. Stroe, F. Mernier, H. T. Intema, H. J. A. Röttgering, G. Brunetti, “**Complex Diffuse Emission in the $z = 0.52$ Cluster PLCK G004.5–19.5**”, 2017, [A&A](#), **607**, A4 [[arXiv](#)]
9. R. F. J. van der Burg, H. Hoekstra, A. Muzzin, **C. Sifón**, et al. (17 co-authors), “**The Abundance of Ultra-Diffuse Galaxies from Groups to Clusters: UDGs Are Relatively More Common in More Massive Haloes**”, 2017, [A&A](#), **607**, A79 [[arXiv](#)]
8. E. van Uitert, M. Cacciato, H. Hoekstra, M. Brouwer, **C. Sifón**, et al. (29 co-authors), “**The Stellar-to-Halo Mass Relation of GAMA Galaxies from 100 Square Degrees of KiDS Weak Lensing Data**”, 2016, [MNRAS](#), **459**, 3251 [[arXiv](#)]

7. D. Kirk, M. L. Brown, H. Hoekstra, B. Joachimi, T. D. Kitching, R. Mandelbaum, **C. Sifón**, M. Cacciato, A. Choi, A. Kiessling, A. Leonard, A. Rassat, B. Malte Schäfer, “**Galaxy Alignments: Observations and Impact on Cosmology**”, 2015, [Space Sci. Rev.](#), **193**, 139 [[arXiv](#)]
6. A. Kiessling, M. Cacciato, B. Joachimi, D. Kirk, T. D. Kitching, A. Leonard, R. Mandelbaum, B. Malte Schäfer, **C. Sifón**, M. L. Brown, A. Rassat, “**Galaxy Alignments: Theory, Modelling & Simulations**”, 2015, [Space Sci. Rev.](#), **193**, 67 [[arXiv](#)]
5. B. Joachimi, M. Cacciato, T. D. Kitching, A. Leonard, R. Mandelbaum, B. Malte Schäfer, **C. Sifón**, H. Hoekstra, A. Kiessling, D. Kirk, A. Rassat, “**Galaxy Alignments: an Overview**”, 2015, [Space Sci. Rev.](#), **193**, 1 [[arXiv](#)]
4. R. F. J. van der Burg, H. Hoekstra, A. Muzzin, **C. Sifón**, M. L. Balogh, S. McGee, “**Evidence for the Inside-Out Growth of the Stellar Mass Distribution in Galaxy Clusters since $z \sim 1$** ”, 2015, [A&A](#), **577**, 19 [[arXiv](#)]
3. M. Hilton, M. Hasselfield, **C. Sifón**, et al. (26 co-authors), “**The Atacama Cosmology Telescope: The Stellar Content of Galaxy Clusters Selected Using the Sunyaev-Zel’dovich Effect**”, 2013, [MNRAS](#), **435**, 3469 [[arXiv](#)]
2. F. Menanteau, **C. Sifón**, et al. (26 co-authors), “**The Atacama Cosmology Telescope: Physical Properties of Sunyaev-Zel’dovich Effect Clusters on the Celestial Equator**”, 2013, [ApJ](#), **765**, 67 [[arXiv](#)]
1. F. Menanteau, J. P. Hughes, **C. Sifón**, et al. (27 co-authors), “**The Atacama Cosmology Telescope: ACT-CL J0102–4915 “El Gordo,” a Massive Merging Cluster at Redshift 0.87**”, 2012, [ApJ](#), **748**, 7 [[arXiv](#)]

Contributing Author Papers (All including **C. Sifón**)

60. K. Knowles et al. (28 co-authors), “**MERGHES Pilot: MeerKAT Discovery of Diffuse Emission in Nine Massive Sunyaev-Zel’dovich-Selected Galaxy Clusters from ACT**”, 2020, [arXiv:2012.15088](#), submitted to MNRAS
59. N. C. Robertson et al. (46 co-authors), “**Strong Detection of the CMB Lensing \times Galaxy Weak Lensing Cross-Correlation from ACT-DR4, Planck Legacy and KiDS-1000**”, 2020, [arXiv:2011.11613](#), submitted to A&A
58. S. Amodeo et al. (55 co-authors), “**The Atacama Cosmology Telescope: Modelling the Gas Thermodynamics in BOSS CMASS Galaxies from Kinematic and Thermal Sunyaev-Zel’dovich Measurements**”, 2020, [arXiv:2009.05558](#), submitted to Phys. Rev. D
57. E. Schaaf et al. (61 co-authors), “**The Atacama Cosmology Telescope: Combined Kinematic and Thermal Sunyaev-Zel’dovich Measurements from BOSS CMASS and LOWZ Halos**”, 2020, [arXiv:2009.05557](#), submitted to Phys. Rev. D
56. S. Adhikari et al. (113 co-authors), “**Probing Galaxy Evolution in Massive Clusters using ACT and DES: Splashback as a Cosmic Clock**”, 2020, [arXiv:2008.11663](#), submitted to ApJ
55. S. Naess et al. (56 co-authors), “**The Atacama Cosmology Telescope: Arcminute-Resolution Maps of 18,000 Square Degrees of the Microwave Sky from ACT 2008-2018 Data Combined with Planck**”, 2020, [arXiv:2007.07290](#), submitted to JCAP
54. S. Aiola et al. (128 co-authors), “**The Atacama Cosmology Telescope: DR4 Maps and Cosmological Parameters**”, 2020, [arXiv:2007.07288](#), submitted to JCAP
53. B. Fuzia et al. (22 co-authors), “**The Atacama Cosmology Telescope: SZ-Based Masses and Dust Emission from IR-Selected Cluster Candidates in the SHELA Survey**”, 2020, [arXiv:2001.09587](#), submitted to MNRAS
52. S. K. Choi et al. (120 co-authors), “**The Atacama Cosmology Telescope: a Measurement of the Cosmic Microwave Background Power Spectra at 98 and 150 GHz**”, 2020, [arXiv:2007.07289](#), accepted for publication in JCAP
51. O. Darwish et al. (45 co-authors), “**The Atacama Cosmology Telescope: a CMB Lensing Mass Map over 2100 Square Degrees of Sky and its Cross-Correlation with BOSS-CMASS Galaxies**”, 2020, [MNRAS](#), **500**, 2250 [[arXiv](#)]

50. E. N. Taylor et al. (17 co-authors), **“GAMA+KiDS: Empirical Correlations between Halo Mass and other Galaxy Properties near the Knee of the Stellar-to-Halo Mass Relation”**, 2020, *MNRAS*, 499, 2896 [arXiv]
49. Z. Li et al. (27 co-authors), **“The Cross Correlation of the ABS and ACT Maps”**, 2020, *JCAP*, 09, 010 [arXiv]
48. Y. Rong et al. (13 co-authors), **“Intrinsic Morphology Evolution of Ultra-diffuse Galaxies”**, 2019, *ApJ*, 899, 78 [arXiv]
47. L. Linke et al. (12 co-authors), **“KiDS+VIKING+GAMA: Testing Semi-Analytic Models of Galaxy Evolution with Galaxy-Galaxy-Galaxy-Lensing”**, 2020, *A&A*, 640, 59 [arXiv]
46. M. Madhavacheril et al. (49 co-authors), **“The Atacama Cosmology Telescope: Component-Separated Maps of CMB Temperature and the Thermal Sunyaev-Zel’dovich Effect”**, 2020, *Phys. Rev. D*, 102, 023534 [arXiv]
45. T. Namikawa et al. (55 co-authors), **“The Atacama Cosmology Telescope: Constraints on Cosmic Birefringence”**, 2020, *Phys. Rev. D*, 101, 083527 [arXiv]
44. S. Huang et al. (12 co-authors), **“Weak Lensing Reveals a Tight Connection Between Dark Matter Halo Mass and the Distribution of Stellar Mass in Massive Galaxies”**, 2020, *MNRAS*, 492, 3685 [arXiv]
43. Q. Xia et al. (13 co-authors), **“A Gravitational Lensing Detection of Filamentary Structures Connecting Luminous Red Galaxies”**, 2020, *A&A*, 633, 89 [arXiv]
42. H. Hildebrandt et al. (28 co-authors), **“KiDS+VIKING-450: Cosmic Shear Tomography with Optical+infrared Data”**, 2020, *A&A*, 633, 69 [arXiv]
41. J. S. Speagle et al. (12 co-authors), **“Galaxy-Galaxy Lensing in HSC: Validation Tests and the Impact of Heterogeneous Spectroscopic Training Sets”**, 2019, *MNRAS*, 490, 5658 [arXiv]
40. K. R. Hall et al. (25 co-authors), **“Quantifying the Thermal Sunyaev-Zel’dovich Effect and Excess Millimeter Emission in Quasar Environments”**, 2019, *MNRAS*, 490, 2315 [arXiv]
39. A. K. Wright et al. (22 co-authors), **“KiDS+VIKING-450: A New Combined Optical & Near-IR Dataset for Cosmology and Astrophysics”**, 2019, *A&A*, 632, A34 [arXiv]
38. C. Hikage et al. (30 co-authors), **“Cosmology from Cosmic Shear Power Spectra with Subaru Hyper Suprime-Cam First-Year Data”**, 2019, *PASJ*, 71, 43 [arXiv]
37. H. Miyatake et al. (58 co-authors), **“Weak-Lensing Mass Calibration of ACTPol Sunyaev-Zel’dovich Clusters with the Hyper Suprime-Cam Survey”**, 2019, *ApJ*, 875, 63 [arXiv]
36. K. Knowles et al. (14 co-authors), **“GMRT 610 MHz Observations of Galaxy Clusters in the ACT Equatorial Sample”**, 2019, *MNRAS*, 486, 1332 [arXiv]
35. M. Brouwer et al. (18 co-authors), **“Studying Galaxy Troughs and Ridges using Weak Gravitational Lensing with the Kilo-Degree Survey”**, 2018, *MNRAS*, 481, 5189 [arXiv]
34. R. Wojtak et al. (17 co-authors), **“Galaxy Cluster Mass Reconstruction Project - IV. Understanding the Effects of Imperfect Membership on Cluster Mass Estimation”**, 2018, *MNRAS*, 481, 324 [arXiv]
33. A. Jakobs et al. (20 co-authors), **“Multi-Wavelength Scaling Relations in Galaxy Groups: a Detailed Comparison of GAMA and KiDS Observations to BAHAMAS Simulations”**, 2018, *MNRAS*, 480, 3338 [arXiv]
32. A. Dvornik et al. (14 co-authors), **“Unveiling Galaxy Bias via the Halo Model, KiDS and GAMA”**, 2018, *MNRAS*, 479, 1240 [arXiv]
31. J. P. Greco et al. (13 co-authors), **“Illuminating Low-Surface-Brightness Galaxies with the Hyper Suprime-Cam Survey”**, 2018, *ApJ*, 857, 104 [arXiv]
30. J. F. Wu, P. Aguirre, A. J. Baker, M. J. Devlin, M. Hilton, J. P. Hughes, L. Infante, R. R. Lindner, **C. Sifón**, **“Herschel and ALMA Observations of Massive SZE-selected Clusters”**, 2018, *ApJ*, 853, 195 [arXiv]
29. E. Medezinski et al. (16 co-authors), **“Source Selection for Cluster Weak Lensing Measurements in the Hyper Suprime-Cam Survey”**, 2018, *PASJ*, 70, 30 [arXiv]

28. E. Medezinski et al. (12 co-authors), “**Planck Sunyaev-Zel’dovich Cluster Mass Calibration using Hyper Suprime-Cam Weak Lensing**”, 2018, *PASJ*, 70, 28 [\[arXiv\]](#)
27. R. Mandelbaum et al. (27 co-authors), “**The First-Year Shear Catalog of the Subaru Hyper Suprime-Cam SSP Survey**”, 2018, *PASJ*, 70, 25 [\[arXiv\]](#)
26. L. Old et al. (18 co-authors), “**Galaxy Cluster Mass Reconstruction Project: III. The Impact of Dynamical Substructure on Cluster Mass Estimates**”, 2018, *MNRAS*, 475, 853 [\[arXiv\]](#)
25. M. Velliscig et al. (17 co-authors), “**Galaxy-Galaxy Lensing in EAGLE: Comparison with Data from 180 Square Degrees of the KiDS and GAMA Surveys**”, 2017, *MNRAS*, 471, 2856 [\[arXiv\]](#)
24. A. Dvornik et al. (22 co-authors), “**A KiDS Weak Lensing Analysis of Assembly Bias in GAMA Galaxy Groups**”, 2017, *MNRAS*, 468, 3251 [\[arXiv\]](#)
23. M. M. Brouwer et al. (22 co-authors), “**First Test of Verlinde’s Theory of Emergent Gravity Using Weak Gravitational Lensing Measurements**”, 2017, *MNRAS*, 466, 2547 [\[arXiv\]](#)
22. M. M. Brouwer et al. (36 co-authors), “**Dependence of GAMA Galaxy Halo Masses on the Cosmic Web Environment from 100 Square Degrees of KiDS Weak Lensing Data**”, 2016, *MNRAS*, 462, 4451 [\[arXiv\]](#)
21. N. Battaglia et al. (39 co-authors), “**Weak-Lensing Mass Calibration of the Atacama Cosmology Telescope Equatorial Sunyaev-Zel’dovich Cluster Sample with the Canada-France-Hawaii Telescope Stripe 82 Survey**”, 2016, *JCAP*, 08, 013 [\[arXiv\]](#)
20. S. Bellstedt et al. (16 co-authors), “**The Evolution in the Stellar Mass of Brightest Cluster Galaxies over the Past 10 Billion Years**”, 2016, *MNRAS*, 460, 2862 [\[arXiv\]](#)
19. K. Knowles et al. (21 co-authors), “**A Giant Radio Halo in a Low-Mass SZ-Selected Galaxy Cluster: ACT-CL J0256.5+0006**”, 2016, *MNRAS*, 459, 4240 [\[arXiv\]](#)
18. D. Crichton et al. (22 co-authors), “**Evidence for the Thermal Sunyaev-Zel’dovich Effect Associated with Quasar Feedback**”, 2016, *MNRAS*, 458, 1478 [\[arXiv\]](#)
17. J. T. A. de Jong et al. (49 co-authors), “**The First and Second Data Releases of the Kilo Degree Survey**”, 2015, *A&A*, 582, 62 [\[arXiv\]](#)
16. K. Kuijken et al. (35 co-authors), “**Gravitational Lensing Analysis of the Kilo Degree Survey**”, 2015, *MNRAS*, 454, 3500 [\[arXiv\]](#)
15. K. Y. Ng, W. A. Dawson, D. Wittman, M. J. Jee, J. P. Hughes, F. Menanteau, **C. Sifón**, “**The Return of the Merging Galaxy Subclusters of El Gordo?**”, 2015, *MNRAS*, 453, 1531 [\[arXiv\]](#)
14. M. Viola et al. (27 co-authors), “**Dark Matter Halo Properties of GAMA Galaxy Groups from 100 Square Degrees of KiDS Weak Lensing Data**”, 2015, *MNRAS*, 452, 3529 [\[arXiv\]](#)
13. R. R. Lindner et al. (25 co-authors), “**The Atacama Cosmology Telescope: the LABOCA/ACT Survey of Clusters at All Redshifts**”, 2015, *ApJ*, 803, 79 [\[arXiv\]](#)
12. B. Kirk et al. (23 co-authors), “**SALT Spectroscopic Observations of Galaxy Clusters Detected by ACT and a Type II Quasar Hosted by a Brightest Cluster Galaxy**”, 2015, *MNRAS*, 449, 4010 [\[arXiv\]](#)
11. L. Old et al. (24 co-authors), “**Galaxy Cluster Mass Reconstruction Project: II. Results for Galaxy-Based Techniques with Improved Models**”, 2015, *MNRAS*, 449, 1897 [\[arXiv\]](#)
10. M. B. Gralla et al. (41 co-authors), “**A Measurement of the Millimeter Emission and the Sunyaev-Zel’dovich Effect Associated with Low-Frequency Radio Sources**”, 2014, *MNRAS*, 445, 460 [\[arXiv\]](#)
9. L. Old et al. (21 co-authors), “**Galaxy Cluster Mass Reconstruction Project: I. Methods and First Results on Galaxy-Based Techniques**”, 2014, *MNRAS*, 441, 1513 [\[arXiv\]](#)
8. M. J. Jee, J. P. Hughes, F. Menanteau, **C. Sifón**, L. F. Barrientos, L. Infante, R. Mandelbaum, K. Y. Ng, “**Weighing “El Gordo” with a Precision Scale: Hubble Space Telescope Weak-Lensing Analysis of the Galaxy Cluster ACT-CL J0102-4915 at $z = 0.87$** ”, 2014, *ApJ*, 785, 20 [\[arXiv\]](#)
7. M. Hasselfield et al. (44 co-authors), “**The Atacama Cosmology Telescope: Sunyaev-Zel’dovich Selected Galaxy Clusters at 148 GHz from Three Seasons of Data**”, 2013, *JCAP*, 07, 008 [\[arXiv\]](#)

6. E. Calabrese et al. (34 co-authors), **“Cosmological Parameters from Pre-Planck Cosmic Microwave Background Measurements”**, 2013, [Phys. Rev. D](#), 87, 103012 [[arXiv](#)]
5. N. Sehgal et al. (36 co-authors), **“The Atacama Cosmology Telescope: Relation between Galaxy Cluster Optical Richness and Sunyaev-Zel’dovich Effect”**, 2013, [ApJ](#), 767, 38 [[arXiv](#)]
4. H. Miyatake et al. (28 co-authors), **“Subaru Weak-Lensing Measurement of a $z = 0.81$ Cluster Discovered by the Atacama Cosmology Telescope Survey”**, 2013, [MNRAS](#), 429, 3627 [[arXiv](#)]
3. B. D. Sherwin et al. (31 co-authors), **“The Atacama Cosmology Telescope: Cross-correlation of CMB Lensing and Quasars”**, 2012, [Phys. Rev. D](#), 86, 083006 [[arXiv](#)]
2. N. Hand et al. (58 co-authors), **“Evidence of Galaxy Cluster Motions with the Kinematic Sunyaev-Zel’dovich Effect”**, 2012, [Phys. Rev. Letters](#), 109, 041101 [[arXiv](#)]
1. E. D. Reese et al. (44 co-authors), **“The Atacama Cosmology Telescope: High-Resolution Sunyaev-Zel’dovich Array Observations of ACT SZE-selected Clusters from the Equatorial Strip”**, 2012, [ApJ](#), 751, 12 [[arXiv](#)]