

Antonio Ferragamo

Curriculum Vitae

Research Experience

- May 2023 – present **Postdoctoral Research**, *Instituto de Astrofísica de Canarias (IAC)*, San Cristobal de La Laguna, Spain.
- January 2022 – present **Margarita Salas Postdoctoral fellow**, *Universidad de La Laguna*, San Cristobal de La Laguna, Spain.
- October 2020 – October 2021 **Postdoctoral Research**, *Sapienza Università di Roma, Dipartimento di Fisica*, Roma, Italy.
- April 2014 – October 2019 **PhD**, *Instituto de Astrofísica de Canarias (IAC)*, San Cristobal de La Laguna, Spain.
Supervisors: Dr. José Alberto Rubiño Martín & Dr. Rafael Barrena Delgado
- November 2012 – July 2013 **European student exchange program ERASMUS**, *Universidad de Salamanca*, Salamanca, Spain.
Supervisor: Prof. Fernando Atrio-Barandela

Education

- October 2021–present **Master degree in Data Science**.
Institution: Università degli Studi di Napoli Federico II, Napoli, Italy
- 2014–2019 **PhD in Astrophysics**.
Institution: Universidad de La Laguna, San Cristobal de La Laguna, Spain
Instituto de Astrofísica de Canarias, San Cristobal de La Laguna, Spain
Thesis Title: *Optical Characterisation of the Planck PSZ1 Galaxy Cluster Catalogue: Building a Reference Sample for Cosmology*
Supervisors: Dr. José Alberto Rubiño Martín & Dr. Rafael Barrena Delgado
Grade: Sobresaliente (outstanding) cum laude
- 2010–2013 **Master degree in Astrophysics and Space Science**.
Institution: Università degli Studi di Napoli Federico II, Napoli, Italy
Thesis Title: *Growth of matter density perturbations in Dark Energy Cosmological models in Extended Theory of Gravity*
Supervisors: Prof. Salvatore Capozziello, Prof. Fernando Atrio-Barandela
Grade: 110/110 cum laude
- 2005–2009 **Bachelor degree in Physics**.
Institution: Università degli Studi di Napoli Federico II, Napoli, Italy
Thesis Title: *Conformal Transformation in Extended Theories of Gravity*
Supervisors: Prof. Salvatore Capozziello
Grade: 105/110

Work Experience

November 2021–January 2022 **High school Math and Physics Professor.**
Institution: Liceo Statale Ettore Majorana, Pozzuoli, Italy

Visits and Collaborations

January 2022 **Sapienza Università di Roma, Roma, Italy.**
– Present Host: Prof. Marco De Petris

October 17 – 30, 2021 **Universidad de Salamanca, Salamanca, Spain.**
Host: Dr Ivan De Martino

September – November 2017 **Laboratoire de Physique Subatomique & Cosmologie IN2P3 (CNRS), Université Grenoble Alpes, Grenoble, France.**
Host: Dr Juan Macias–Perez

May – June 2016 **INAF – Osservatorio Astronomico di Trieste (INAF–OAT), Trieste, Italy.** Host: Prof. Marisa Girardi

Software skills

Astronomical Software **IRAF, GAIA, TopCat, Aladin Sky Atlas.**

Programming Languages **Python, IDL, Fortran, L^AT_EX.**

Operating Systems **MacOSX, Linux, Microsoft Windows.**

Observational Experiences

Optical

Nights in optical telescopes.

Nights **New Technology Telescope (NTT), La Silla Paranal Observatory, La Serena, Chile.**
Instrument: EFOSC2, Spectroscopic mode (Multi Object Spectroscopy, Long-Slit)

Nights **Telescopio Nazionale Galileo (TNG), Observatorio Roque de Los Muchachos, La Palma, Spain.**
Instrument: DOLORES, Spectroscopic mode (Multi Object Spectroscopy, Long-Slit), Imaging mode

Nights **William Herschel Telescope (WHT), Observatorio Roque de Los Muchachos, La Palma, Spain.**
Instrument: ACAM, Imaging mode, Spectroscopic mode (Long-Slit)

Nights **Isaac Newton Telescope (INT), Observatorio Roque de Los Muchachos, La Palma, Spain.**
Instrument: WFC, Imaging mode

Data Analysis **~100 MOS masks designed, DOLORES-TNG, OSIRIS-GTC.**
~2500 spectra reduced, DOLORES-TNG, OSIRIS-GTC.

Microwave

27 days of Observing Pools.

158 hours **IRAM 30-meter Telescope**, *Pico Veleta, Granada, Spain.*

Instruments: NIKA2 (1–2mm), Emir (3–2mm), Hera (1mm)

Observational Time Awarded

Semester 19A **WFC/INT**, *Program: C77*, PI: A. Ferragamo.

Member of Collaborations

2023–Present **WEAVE Collaboration**, *Galaxy Clusters survey.*

P.I.: Dr. J. Alfonso López Aguerra

2020–Present **The Three Hundred Project.**

Steering Committee: Dr. W. Cui, Prof. R.S. Dave, DR. M. Gray, Prof. A. Knebe, Prof. F. Pearce, Dr. C. Power, Dr. E. Rasia & Prof. G. Yepes

2018–Present **CHEX-MATE**, *member of working groups B*, lensing & optical.

PI: Dr. M. Arnaud & Dr. S. Ettori

2017–Present **NIKA2 SZ Large Program**, *member of the LPSZ team.*

PI: Dr. F. Mayet & Dr. L. Perotto

2017–Present **EUCLID**, *member of the IAC photometric redshift calibration group.*

PI: Dr. Rafael Rebolo

Member of Societies

2018–Present **Sociedad Española de Astronomía (SEA).**

2018–Present **European Astronomical Society (EAS).**

Teaching and Tutoring activity

October 2022–Present **co-Tutor**, *PhD-student: Sara Santoni*, Sapienza Università di Roma.

October 2020–Present **co-Tutor**, *PhD-student: Aishwarya Paliwal*, Sapienza Università di Roma.

January 2022–June 2022 **co-Supervisor**, *Master thesis: Alessia Sbriglio*, Sapienza Università di Roma.

January 2022–October 2022 **co-Supervisor**, *Master thesis: Sara Santoni*, Sapienza Università di Roma.

Other activities

July 2021 **co-Chair Local Organizing Comitee**, *mm Universe @ NIKA2, 2nd edition*, Rome, Italy.

July 2021–January 2022 **Editor of the proceedings book**, *mm Universe @ NIKA2 - Observing the mm Universe with the NIKA2 camera*, EPJ Web of Conferences Volume 257 (2022).
<https://www.epj-conferences.org/articles/epjconf/abs/2022/01/contents/contents.html>

2020 – Present **Referee**, *Astronomy & Astrophysics.*

2020 – Present **Referee**, *Monthly Notices of the Royal Astronomical Society.*

Languages

Italian	Mother-tongue	
Spanish	Advanced	<i>Con conversationally fluent</i>
English	Advanced	<i>Con conversationally fluent</i>

Meetings/Conferences/Workshops/Schools attended

- October 2023 **Astroinformatics-2023 Conference, Napoli, Italy.**
Talk: "The Three Hundred project: A Machine Lear method to infer clusters of galaxies mass ra from mock Sunyaev-Zel'dovich maps"
- June 2023 **mm Universe @ NIKA2, 3rd edition, Grenoble, France.**
Talk: "The Three Hundred project: A Machine Lear method to infer clusters of galaxies mass ra from mock Sunyaev-Zel'dovich maps"
- September 2022 **XV Reunión Científica de la Sociedad Española de Astronomía (SEA), San Cristobal de La Laguna, Spain.**
Talk: "Velocity dispersion vs cluster mass a new scaling law with THE THREE HUNDRED clusters"
- July 2021 **mm Universe @ NIKA2, 2nd edition, Rome, Italy.**
Talk: "Velocity dispersion vs cluster mass: a new scaling law with The Three Hundred clusters"
- June 2019 **mm Universe @ NIKA2, 1st edition, Grenoble, France.**
Talk: "Biases in the Estimation of Galaxy Cluster Dynamical Masses"
- September 2018 **CLUSTER 2, Napoli, Italy.**
Poster: "Mdyn–MSZ Scaling Relation: Biased or not Biased?"
- July 2018 **XIII Reunión Científica de la Sociedad Española de Astronomía (SEA), Salamanca, Spain.**
Talk: "Sunyaev–Zeldovich vs dynamical masses. Scaling relations from optical follow-up of Planck SZ sources data"
- November 2017 **2nd NIKA2 Collaboration Meeting, Grenoble, France.**
Talk: "Optical Follow–up: From Planck to NIKA2"
- July 2017 **geco-lam2017 : Galaxy Clusters Across Cosmic Time, Aix en Provence, France.**
Poster: "Biased or not Biased?"
- February 2017 **CLUSTER 1, Torino, Italy.**
Talk: "Sunyaev-Zeldovich vs dynamical masses. Scaling relations using optical follow-up of Planck SZ sources"
- June 2016 **IV Meeting on Fundamental Cosmology, Barcelona, Spain.**
Poster: "Optical follow-up of Planck Sunyaev–Zeldovich sources: dynamical masses and scaling laws"
- June 2015 **European Week of Astronomy and Space Science (EWASS) 2015, Tenerife, Spain.**
Poster: "Optical Validation of Sunyaev-Zeldovich Planck sources at Canary Island Observatories"
- November 2015 **XVI Canary Islands Winter School of Astrophysics on Bayesian Statistics, Tenerife, Spain.**
- June 2014 **II Meeting on Fundamental Cosmology, Fuerteventura, Spain.**
Poster: "Optical follow–up of Planck–SZ clusters at "Canary Islands Observatories" telescopes"
- November 2013 **School on Cosmology Tools, Madrid, Spain.**

September **School/Workshop on Modified Gravity Theories: Beyond Einstein's Legacy**, *Lisbon*,
2013 Portugal.

Talk: "Growth factor of the large scale structure in $f(R)$ gravity"

October 2012 **XX SIGRAV Conference, Napoli, Italy.**

June 2012 **Summer School in Statistics for Astronomers VIII, State College, Pennsylvania, U.S.A..**

Invited Talks

January 24, **Revealing systematics in cluster mass estimates: a pilot study in MACS 2022 J0647.7+7015.**

University of Minnesota, USA

October 20, **Velocity dispersion vs cluster mass scaling law with The Three Hundred clusters.** 2021

Universidad de Salamanca, Spain

Dicembre 05, **Sunyaev–Zeldovich vs dynamical masses scaling relations using 207 galaxy clusters.** 2019

Università degli studi di Torino, Italy

December 20, **Sunyaev–Zeldovich vs dynamical masses. Scaling relations from optical follow-up 2017 of Planck SZ sources data.**

Universidad del Pais Vasco, Bilbao, Spain

March 03, **Sunyaev–Zeldovich vs dynamical masses. Scaling relations using optical follow-up 2017 of Planck SZ sources.**

Università degli studi di Napoli Federico II, Napoli, Italy

Public Outreach

March 03, **Noi ed i pianeti extrasolari, (school talk).**

2017 Istituto Comprensivo Statale "De Nicola–Sasso", Torre del Greco, Italy

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Publications List

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First Author

- A. Ferragamo**, D. de Andres, A. Sbriglio, W. Cui, M. De Petris, G. Yepes, R. Dupuis, M. Jarraya, I. Lahouli, F. De Luca, G. Gianfagna, and E. Rasia (Apr. 2023). “THE THREE HUNDRED project: a machine learning method to infer clusters of galaxy mass radial profiles from mock Sunyaev-Zel’dovich maps”. In: *MNRAS* 520.3, pp. 4000–4008. doi: 10.1093/mnras/stad377. eprint: 2207.12337.
- A. Ferragamo**, J. F. Macias-Pérez, V. Pelgrims, F. Ruppin, M. De Petris, F. Mayet, M. Muñoz-Echeverría, L. Perotto, and E. Pointecouteau (May 2022). “Comparison of hydrostatic and lensing cluster mass estimates: A pilot study in MACS J0647.7+7015”. In: *A&A* 661, A65, A65. doi: 10.1051/0004-6361/202140276.
- A. Ferragamo**, R. Barrena, J. A. Rubiño-Martín, A. Aguado-Barahona, A. Streblyanska, D. Tramonte, R. T. Génova-Santos, A. Hempel, and H. Lietzen (Nov. 2021). “Velocity dispersion and dynamical mass for 270 galaxy clusters in the Planck PSZ1 catalogue”. In: *A&A* 655, A115, A115. doi: 10.1051/0004-6361/202140382.
- A. Ferragamo**, J. A. Rubiño-Martín, J. Betancort-Rijo, E. Munari, B. Sartoris, and R. Barrena (Sept. 2020). “Biases in galaxy cluster velocity dispersion and mass estimates in the small N_{gal} regime”. In: *A&A* 641, A41, A41. doi: 10.1051/0004-6361/201834837.

Refereed

- Iqbal, A., G. W. Pratt, J. Bobin, M. Arnaud, E. Rasia, M. Rossetti, R. T. Duffy, I. Bartalucci, H. Bourdin, F. De Luca, M. De Petris, M. Donahue, D. Eckert, S. Ettori, **A. Ferragamo**, M. Gaspari, F. Gastaldello, R. Gavazzi, S. Ghizzardi, L. Lovisari, P. Mazzotta, B. J. Maughan, E. Pointecouteau, and M. Sereno (Nov. 2023). “CHEX-MATE: A non-parametric deep learning technique to deproject and deconvolve galaxy cluster X-ray temperature profiles”. In: *A&A* 679, A51, A51. doi: 10.1051/0004-6361/202347234. eprint: 2309.02075.
- Bartalucci, I., S. Molendi, E. Rasia, G. W. Pratt, M. Arnaud, M. Rossetti, F. Gastaldello, D. Eckert, M. Balboni, S. Borgani, H. Bourdin, M. G. Campitiello, S. De Grandi, M. De Petris, R. T. Duffy, S. Ettori, **A. Ferragamo**, M. Gaspari, R. Gavazzi, S. Ghizzardi, A. Iqbal, S. T. Kay, L. Lovisari, P. Mazzotta, B. J. Maughan, E. Pointecouteau, G. Riva, and M. Sereno (June 2023). “CHEX-MATE: Constraining the origin of the scatter in galaxy cluster radial X-ray surface brightness profiles”. In: *A&A* 674, A179, A179. doi: 10.1051/0004-6361/202346189. eprint: 2305.03082.
- Muñoz-Echeverría, M., J. F. Macias-Pérez, G. W. Pratt, R. Adam, P. Ade, H. Ajeddig, P. André, M. Arnaud, E. Artis, H. Aussel, I. Bartalucci, A. Beelen, A. Benoit, S. Berta, L. Bing, O. Bourrion, M. Calvo, A. Catalano, M. De Petris, F. -X. Désert, S. Doyle, E. F. C. Driessen, **A. Ferragamo**, A. Gomez, J. Goupy, C. Hanser, F. Kéruzoré, C. Kramer, B. Ladjelate, G. Lagache, S. Leclercq, J. -F. Lestrade, A. Maury, P. Mauskopf, F. Mayet, J. -B. Melin, A. Monfardini, A. Paliwal, L. Perotto, G. Pisano, E. Pointecouteau, N. Ponthieu, V. Revéret, A. J. Rigby, A. Ritacco, C. Romero, H. Roussel, F. Ruppin, K. Schuster, S. Shu, A. Sievers, C. Tucker, and G. Yepes (Mar. 2023). “Multi-probe analysis of the galaxy cluster CL J1226.9+3332. Hydrostatic mass and hydrostatic-to-lensing bias”. In: *A&A* 671, A28, A28. doi: 10.1051/0004-6361/202244981. eprint: 2209.07460.

Cui, Weiguang, Romeel Dave, Alexander Knebe, Elena Rasia, Meghan Gray, Frazer Pearce, Chris Power, Gustavo Yepes, Dhayaa Anbajagane, Daniel Ceverino, Ana Contreras-Santos, Daniel de Andres, Marco De Petris, Stefano Ettori, Roan Haggard, Qingyang Li, Yang Wang, Xiaohu Yang, Stefano Borgani, Klaus Dolag, Ying Zu, Ulrike Kuchner, Rodrigo Cañas, **Antonio Ferragamo**, and Giulia Gianfagna (July 2022). “THE THREE HUNDRED project: The GIZMO-SIMBA run”. In:

MNRAS 514.1, pp. 977–996. doi: 10.1093/mnras/stac1402.

Aguado-Barahona, A., J. A. Rubiño-Martín, **A. Ferragamo**, R. Barrena, A. Streblyanska, and D. Tramonte (Mar. 2022). “Velocity dispersion and dynamical masses for 388 galaxy clusters and groups. Calibrating the $M_{SZ} - M_{dyn}$ scaling relation for the PSZ2 sample”. In: *A&A* 659, A126, A126. doi: 10.1051/0004-6361/202039980.

CHEX-MATE Collaboration, M. Arnaud, S. Ettori, G. W. Pratt, M. Rossetti, D. Eckert, F. Gastaldello, R. Gavazzi, S. T. Kay, L. Lovisari, B. J. Maughan, E. Pointecouteau, M. Sereno, I. Bartalucci, A. Bonafede, H. Bourdin, R. Cassano, R. T. Duffy, A. Iqbal, S. Maurogordato, E. Rasia, J. Sayers, F. Andrade-Santos, H. Aussel, D. J. Barnes, R. Barrena, S. Borgani, S. Burkutean, N. Clerc, P. -S. Corasaniti, J. -C. Cuillandre, S. De Grandi, M. De Petris, K. Dolag, M. Donahue, **A. Ferragamo**, M. Gaspari, S. Ghizzardi, M. Gitti, C. P. Haines, M. Jauzac, M. Johnston-Hollitt, C. Jones, F. Kéruzoré, A. M. C. LeBrun, F. Mayet, P. Mazzotta, J. -B. Melin, S. Molendi, M. Nonino, N. Okabe, S. Paltani, L. Perotto, S. Pires, M. Radovich, J. -A. Rubino-Martín, L. Salvati, A. Saro, B. Sartoris, G. Schellenberger, A. Streblyanska, P. Tarrío, P. Tozzi, K. Umetsu, R. F. J. van der Burg, F. Vazza, T. Venturi, G. Yepes, and S. Zarattini (June 2021). “The Cluster HEritage project with XMM-Newton: Mass Assembly and Thermodynamics at the Endpoint of structure formation. I. Programme overview”. In: *A&A* 650, A104, A104. doi: 10.1051/0004-6361/202039632.

Barrena, R., **A. Ferragamo**, J. A. Rubiño-Martín, A. Streblyanska, A. Aguado-Barahona, D. Tramonte, R. T. Génova-Santos, A. Hempel, H. Lietzen, N. Aghanim, M. Arnaud, H. Böhringer, G. Chon, H. Dahle, M. Douspis, A. N. Lasenby, P. Mazzotta, J. B. Melin, E. Pointecouteau, G. W. Pratt, and M. Rossetti (June 2020). “Optical validation and characterisation of Planck PSZ1 sources at the Canary Islands observatories. II. Second year of ITP13 observations”. In: *A&A* 638, A146, A146. doi: 10.1051/0004-6361/202037552.

De Natale, G., V. Ricciardi, G. De Luca, D. De Natale, G. Di Meglio, **A. Ferragamo**, V. Marchitelli, A. Piccolo, A. Scala, R. Somma, E. Spina, and C. Troise (May 2020). “The COVID-19 Infection in Italy: A Statistical Study of an Abnormally Severe Disease”. In: *J. Clin. Med.* 9(5), 1564, p. 1564. doi: <https://doi.org/10.3390/jcm9051564>.

Aguado-Barahona, A., R. Barrena, A. Streblyanska, **A. Ferragamo**, J. A. Rubiño-Martín, D. Tramonte, and H. Lietzen (Nov. 2019). “Optical validation and characterization of Planck PSZ2 sources at the Canary Islands observatories. II. Second year of LP15 observations”. In: *A&A* 631, A148, A148. doi: 10.1051/0004-6361/201936034.

Streblyanska, A., A. Aguado-Barahona, **A. Ferragamo**, R. Barrena, J. A. Rubiño-Martín, D. Tramonte, R. T. Génova-Santos, and H. Lietzen (Aug. 2019). “Optical validation and characterization of Planck PSZ2 sources at the Canary Islands observatories. I. First year of LP15 observations”. In: *A&A* 628, A13, A13. doi: 10.1051/0004-6361/201935674.

Mata Sánchez, D., T. Muñoz-Darias, J. Casares, P. A. Charles, M. Armas Padilla, J. A. Fernández-Ontiveros, F. Jiménez-Ibarra, P. G. Jonker, M. Linares, M. A. P. Torres, A. W. Shaw, P. Rodríguez-Gil, T. van Grunsven, P. Blay, M. D. Caballero-García, A. Castro-Tirado, P. Chinchilla, C. Farina,

- A. Ferragamo**, F. Lopez-Martinez, J. A. Rubiño-Martín, and L. Suárez-Andrés (Sept. 2018). “The 1989 and 2015 outbursts of V404 Cygni: a global study of wind- related optical features”. In: *MNRAS*, p. 2289. doi: 10.1093/mnras/sty2402.
- Streblyanska, A., R. Barrena, J. A. Rubiño-Martín, R. F. J. van der Burg, N. Aghanim, A. Aguado-Barahona, **A. Ferragamo**, and H. Lietzen (Sept. 2018). “Characterization of a subsample of the Planck SZ source cluster catalogues using optical SDSS DR12 data”. In: *A&A* 617, A71, A71. doi: 10.1051/0004-6361/201732306.
- Barrena, R., A. Streblyanska, **A. Ferragamo**, J. A. Rubiño-Martín, A. Aguado-Barahona, D. Tramonte, R. T. Génova-Santos, A. Hempel, H. Lietzen, N. Aghanim, M. Arnaud, H. Böhringer, G. Chon, J. Democles, H. Dahle, M. Douspis, A. N. Lasenby, P. Mazzotta, J. B. Melin, E. Pointecouteau, G. W. Pratt, M. Rossetti, and R. F. J. van der Burg (Aug. 2018). “Optical validation and characterization of Planck PSZ1 sources at the Canary Islands observatories. I. First year of ITP13 observations”. In: *A&A* 616, A42, A42. doi: 10.1051/0004-6361/201732315.
- Sereno, Mauro, Carlo Giocoli, Luca Izzo, Federico Marulli, Alfonso Veropalumbo, Stefano Ettori, Lauro Moscardini, Giovanni Covone, **Ferragamo, Antonio**, Rafael Barrena, and Alina Streblyanska (July 2018). “Gravitational lensing detection of an extremely dense environment around a galaxy cluster”. In: *Nature Astronomy* 2, pp. 744–750. doi: 10.1038/s41550-018-0508-y.
- Planck Collaboration XXVII (Sept. 2016). “Planck 2015 results. XXVII. The second Planck catalogue of Sunyaev- Zeldovich sources”. In: *A&A* 594, A27, A27. doi: 10.1051/0004-6361/201525823. van der Burg, R. F. J., H. Aussel, G. W. Pratt, M. Arnaud, J. -B. Melin, N. Aghanim, R. Barrena, H. Dahle, M. Douspis, **A. Ferragamo**, S. Fromenteau, R. Herbonnet, G. Hurier, E. Pointecouteau, J. A. Rubiño-Martín, and A. Streblyanska (Mar. 2016). “Prospects for high-z cluster detections with Planck, based on a follow- up of 28 candidates using MegaCam at CFHT”. In: *A&A* 587, A23, A23. doi: 10.1051/0004-6361/201527299.
- Planck Collaboration intermediate results. XXXVI (Feb. 2016). “Planck intermediate results. XXXVI. Optical identification and redshifts of Planck SZ sources with telescopes at the Canary Islands observatories”. In: *A&A* 586, A139, A139. doi: 10.1051/0004-6361/201526345.
- Lodieu, N., R. Alonso, J. I. González Hernández, R. Sanchis-Ojeda, N. Narita, Y. Kawashima, K. Kawauchi, A. Suárez Mascareño, H. Deeg, J. Prieto Arranz, R. Rebolo, E. Pallé, V. J. S. Béjar, **A. Ferragamo**, and J. A. Rubiño-Martín (Dec. 2015). “An eclipsing double-line spectroscopic binary at the stellar/substellar boundary in the Upper Scorpius OB association”. In: *A&A* 584, A128, A128. doi: 10.1051/0004-6361/201527464.
- Planck Collaboration XXXII (Sept. 2015). “Planck 2013 results. XXXII. The updated Planck catalogue of Sunyaev- Zeldovich sources”. In: *A&A* 581, A14, A14. doi: 10.1051/0004-6361/201525787.

Non Refereed

- de Andres, Daniel, Weiguang Cui, Gustavo Yepes, Marco De Petris, **Antonio Ferragamo**, Federico De Luca, Gianmarco Aversano, and Douglas Rennehan (Nov. 2023). “The Three Hundred Project: Mapping The Matter Distribution in Galaxy Clusters Via Deep Learning from Multiview Mock Observations”. In: *arXiv e-prints*, arXiv:2311.02469, arXiv:2311.02469. doi: 10.48550/arXiv.2311.02469. arXiv: 2311.02469[astro-ph.CO].
- Capalbo, Valentina, Marco De Petris, Weiguang Cui, **Antonio Ferragamo**, Florian Ruppin, and Gustavo Yepes (Oct. 2023). “Galaxy clusters morphology with Zernike polynomials: the first application on *Planck* Compton parameter maps”. In: *arXiv e-prints*, arXiv:2310.07759, arXiv:2310.07759. doi:

- 10.48550/arXiv.2310.07759. arXiv: 2310.07759[astro-ph.CO].
- Perotto, L., R. Adam, P. Ade, H. Ajeddig, P. André, E. Artis, H. Aussel, R. Barrena, I. Bartalucci, A. Beelen, A. Benoit, S. Berta, L. Bing, O. Bourrion, M. Calvo, A. Catalano, M. De Petris, F. -X. Désert, S. Doyle, E. F. C. Driessen, G. Ejlali, **A. Ferragamo**, A. Gomez, J. Goupy, C. Hanser, S. Katsioli, F. Kéruzoré, C. Kramer, B. Ladjelate, G. Lagache, S. Leclercq, J. -F. Lestrade, J. -F. Macias-Pérez, S. C. Madden, A. Maury, P. Mauskopf, F. Mayet, A. Monfardini, A. Moyer-Anin, M. Muñoz-Echeverria, A. Paliwal, G. Pisano, E. Pointecouteau, N. Ponthieu, G. W. Pratt, V. Revéret, A. J. Rigby, A. Ritacco, C. Romero, H. Roussel, F. Ruppin, K. Schuster, A. Sievers, C. Tucker, and G. Yepes (Oct. 2023). “The NIKA2 Sunyaev-Zeldovich Large Program: Sample and upcoming product public release”. In: *arXiv e-prints*, arXiv:2310.04553, arXiv:2310.04553. doi: 10.48550/arXiv.2310.04553. arXiv: 2310.04553[astro-ph.CO].
- Santoni, Sara, Marco De Petris, **Antonio Ferragamo**, Gustavo Yepes, and Weiguang Cui (Oct. 2023). “Impact of filaments on galaxy cluster properties in The Three Hundred simulation”. In: *arXiv e-prints*, arXiv:2310.07494, arXiv:2310.07494. doi: 10.48550/arXiv.2310.07494. arXiv: 2310.07494 [astro-ph.CO].
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