

Dr Rogério Monteiro de Oliveira

(Monteiro-Oliveira, R.)



rogerionline@gmail.com



monteiro-oliveira.com



orcid.org/0000-0001-6419-8827

postdoc fellow

Academia Sinica Institute of Astronomy and Astrophysics (ASIAA)

11F of AS/NTU Astronomy-Mathematics Building, No.1, Sec. 4, Roosevelt Rd, Taipei 10617, Taiwan, R.O.C.

rmonteiro@asiaa.sinica.edu.tw

Employment

2020-2021	Visiting professor Current member of the Master's program in Physics State University of Santa Cruz (UESC)	Ilhéus, Brazil
2020	Assistant professor University of São Paulo Institute of Astronomy, Geophysics and Atmospheric Sciences (IAG/USP)	São Paulo, Brazil
2018-2019	Postdoc fellow University of São Paulo Institute of Astronomy, Geophysics and Atmospheric Sciences	São Paulo, Brazil
2017-2018	Assistant professor Federal University of Rio Grande do Sul Astronomy Department Institute of Physics (DA/IF-UFRGS)	Porto Alegre, Brazil
2016-2017	Postdoc fellow University of São Paulo Institute of Astronomy, Geophysics and Atmospheric Sciences	São Paulo, Brazil

Education

	Ph.D. in Astronomy	São Paulo, Brazil
	University of São Paulo Institute of Astronomy, Geophysics and Atmospheric Sciences	
2016	<ul style="list-style-type: none">Thesis: Uma contribuição ao estudo de aglomerados de galáxias em fusão (A contribution to the study of merging galaxy clusters)Advisor: Prof. Eduardo S. CyprianoFounded by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)	
	M.S. in Astronomy	São Paulo, Brazil
	University of São Paulo Institute of Astronomy, Geophysics and Atmospheric Sciences	
2011	<ul style="list-style-type: none">Thesis: Aglomerados de galáxias em fusão (Merging galaxy clusters)Advisor: Prof. Eduardo S. CyprianoFounded by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)	
	B.S. in Physics	São Paulo, Brazil
	University of São Paulo Institute of Physics	
2008	<ul style="list-style-type: none">Monography: Geografia e ecologia das galáxias em superaglomerados (Geography and ecology of galaxies in superclusters)Advisor: Prof. Laerte Sodré Jr.	

Main Fields of Research

Large scale structure assembly, galaxy clusters, superclusters of galaxies, galaxy evolution, weak gravitational lensing

Major Collaborations

2022—	Member	PFS Sumire
2021—	Member	Hyper Suprime Camera Survey
2021—	External collaborator	Dark Energy Survey
2021—	Member	LSST
2009-2020	Member	JPAS

Community Service

2022—	Referee	James C. Maxwell Telescope Time Allocation Committee
2019—	Paper Referee	APJ and MNRAS

Accepted proposals

PI Programs:

2023	Magellan/Clay Scaling up our understanding of large structure formation: connecting the BCGs to superclusters	0.5 night M2FS
2023	CFHT Are high redshift ($z > 1.4$) galaxy cluster detections real?	1.3 hours WIRCam
2022	CFHT Breaking the natural barrier: detecting galaxy clusters at $z > 1.4$	2.6 hours WIRCam
2022	CFHT Reconstruction of the mass field in Hercules supercluster using weak gravitational lensing	13.6 hours MegaCam
2021	Gemini Telescope Witnessing the formation of the large-scale structure: a dynamical study of massive galaxy clusters undergoing extreme	28.5 hours GMOS-S
2017	Gemini Telescope Imaging and spectroscopy of the merging galaxy cluster candidate SPT-CL J0411	7.7 hours GMOS-S
2013	Gemini Telescope Spectroscopy follow up of the merging galaxy cluster A2034	3.5 hours GMOS-S

Co-PI Programs:

2023	Gemini Telescope (PI: R. Machado) Witnessing the birth of a giant: spectroscopic observations of the merging galaxy cluster A1758S	3.9 hours GMOS-N
2022	Hubble Space Telescope (PI: A. Zenteno) Clash of Titans: Characterizing SPT-CLJ0307-6225, a major merger in the plane of the sky	5 orbits

2022	MMT (PI: Y-T Lin) Exploration of star formation activity in galaxy clusters at $z \sim 1$	1 night MMIRS
2022	Blanco Telescope (PI: K. Kelkar) Evolving galaxies in evolving environments: Searching for jellyfish galaxies in merging clusters	1 night DECam
2022	Gemini Telescope (PI: R. Dalal) First Characterization of Superclusters detected in the Subaru Hyper Suprime-Cam Survey	22.9 hours GMOS-N
2022	GMRT (PI: K. Kelkar) Diffuse radio emission from the sloshing cluster Abell 1644 and its connection to ram-pressure stripping	8 hours Cycle 41
2010	CFHT (PI: G. Lima Neto) Weak lensing mass reconstruction of the supercluster of galaxies SC0028-0001	11.5 hours MegaCam

Student Advising

2022—	Dionysios Gakis Summer student program at ASIAA Anatomy of a giant: investigating environment effects in the Saraswati supercluster
2022—	Vitor Hugo Yukio Fugivala Master's student at State University of Santa Cruz Structure and dynamics of the Hercules supercluster
2019-2020	Thierry Oliveira Candido Undergraduate student at Federal Institute of Mato Grosso do Sul
2019-2020	Ronaldo Roca Flores Undergraduate student at Federal Institute of Mato Grosso do Sul Mapping the Universe in large scale

Teaching

2020-2021	Professor State University of Santa Cruz 2 Physics courses
2020	Professor University of São Paulo 2 Astronomy courses
2017-2018	Professor Federal University of Rio Grande do Sul 5 Astronomy courses
2012-2015	Teaching assistant University of São Paulo 6 Astronomy courses
2011	Lecturer University Braz Cubas 1 Physics course

Colloquia & Seminars

Oct 2022	Weekly Colloquia National Central University, Taoyuan, Taiwan Connecting Macro to Micro: How can studying the largest structures in the universe help us unveil the nature of dark matter?
Nov 2021	Weekly Colloquia ASIAA, Taipei, Taiwan Galaxy Clusters: the Largest Laboratories in the Universe
Jun 2018	Special Seminar UESC, Ilhéus, Brazil Aglomerados de galáxias: os maiores laboratórios do Universo

- May 2018 Weekly Seminar | Universidade Cruzeiro do Sul, São Paulo, Brazil
C.S.I. (Cluster Science Investigation): solving the case of a cosmic crash
- Jun 2017 Weekly Seminar | (DA/IF-UFRGS, Porto Alegre, Brazil)
Unveiling the Universe dark side through the merging galaxy clusters

Conferences

- Mar 2023 Subaru PFS Science Meeting
Kashiwanoha, Japan
Is the dichotomy among early-type galaxies real?
- Sep 2022 Annual Meeting of the Astronomical Society of the Republic of China (Taiwan)
Minxiong Taiwan
A major galaxy cluster merger caught by eROSITA
- Jan 2022 Annual Meeting of the Physical Society of Taiwan
Taipei, Taiwan
Witnessing the birth of the large-scale structure: anatomy and dynamical analysis of Hercules supercluster
- Jun 2018 Galaxy Cluster Formation II (GCF 2021)
Remote
Peculiar features arising from merging galaxy clusters: the case of A1644 and A2034
- Fev 2019 JSPS-FAPESP Workshop on dark energy, dark matter, and galaxies
São Paulo, Brazil
Merging galaxy clusters and the search for self-interacting dark matter
- Mar 2018 SnowCluster - The Physics of Galaxy Clusters.
Salt Lake City, USA
Unveiling the dark side of the Universe through the merging galaxy clusters
- Jul 2016 ICTP-SAIFR School on Dark Matter.
São Paulo. Brazil
- Ago 2015 IAU General Assembly Meeting
Honolulu, USA
The merging cluster Abell 1758: an optical and dynamical view
- Mar 2015 10th J-PAS Collaboration Meeting
Paraty, Brazil
The merging cluster Abell 1758: adding new pieces into a complex puzzle
- Nov 2014 Cosmology with Galaxy Clusters
Madrid, Spain
The merging cluster Abell 1758: adding new pieces into a complex puzzle
- Sep 2014 XXXVIII Annual Meeting of the Brazilian Astronomical Society
Búzios, Brazil
The merging cluster Abell 1758
- Nov 2013 GMT Science Workshop
São Paulo, Brazil
The merging cluster 1758
- Mar 2013 2nd annual Snowbird Workshop SnowCLUSTER: Physics of Galaxy Clusters
Salt Lake City, USA
Dynamical Analysis of the Merging Cluster Abell 1758
- Feb 2013 USP Conference: Cosmology, large scale structure and first objects
São Paulo, Brazil
The merging cluster 1758

- Nov 2012 XVI IAG/USP Advanced School on Astrophysics
Itatiba, Brazil
The merging cluster Abell 1758
- Oct 2012 XXXVII Annual Meeting of the Brazilian Astronomical Society
Águas de Lindóia, Brazil
The merging cluster Abell 1758
- Sep 2012 Growing up at high redshift: from proto-clusters to galaxy clusters workshop
Madrid, Spain
A multi-technique analysis of the merging cluster Abell 1758
- Apr 2012 Science with LSST: A Brazilian/US joint workshop
Campos do Jordão, Brazil
Merging galaxy clusters
- Oct 2011 South American Gemini Data Workshop
São José dos Campos, Brazil
Merging galaxy clusters
- Sep 2011 XXXVI Annual Meeting of the Brazilian Astronomical Society
Águas de Lindóia, Brazil
Merging galaxy clusters
- Sep 2010 XXXV Annual Meeting of the Brazilian Astronomical Society
Passa Quatro, Brazil
Merging galaxy clusters
- Jul 2010 I Jayme Tiomno School of Cosmology
Rio de Janeiro, Brazil
Merging galaxy clusters

Publications

- 17 Hernández-Lang, D., Zenteno, A., Diaz-Ocampo, A., Cuevas, H., Clancy, J., Prado P. H., Aldás, F., Pallero, D., [Monteiro-Oliveira, R.](#), et al., 2022, MNRAS, 517, 4355
Clash of Titans: A MUSE dynamical study of the extreme cluster merger SPT-CL J0307-6225
- 16 [Monteiro-Oliveira, R.](#), 2022, MNRAS, 515, 3674
A major galaxy cluster merger caught by eROSITA: weak lensing mass distribution and kinematic description
- 15 [Monteiro-Oliveira, R.](#), Morell, D. F., Sampaio, V. M., Ribeiro, A. L. B., de Carvalho, R. R., 2022, MNRAS, 509, 3470
Unveiling the internal structure of Hercules supercluster
- 14 Bonoli, S. + 163 co-authors, [Monteiro-Oliveira, R.](#), et al., 2021, A&A, 653, A31
The miniJPAS survey: a preview of the Universe in 56 colours.
- 13 [Monteiro-Oliveira, R.](#), Soja, A. C., Ribeiro, A. L. B., Bagchi, J., Sankhyayan, S., Candido, T. O., Flores, R. R., 2021, MNRAS, 501, 756
Probing Saraswati's heart: evaluating the dynamical state of the massive galaxy cluster A2631 through a comprehensive weak lensing and dynamical analysis
- 12 Moura, M. T.; Machado, R. E. G., [Monteiro-Oliveira, R.](#), 2021, MNRAS, 500, 1858
Simulations of the merging galaxy cluster Abell 2034: what determines the level of dissociation
- 11 Kelkar, K., Dwarakanath K. S., Poggianti B. M., Moretti A., [Monteiro-Oliveira, R.](#), et al., 2020, MNRAS, 496, 442
Passive spirals and shock influenced star formation in the merging cluster Abell 3376.
- 10 Doubrawa, L., Machado, R. E. G., Laganá, T. F., Lima Neto, G. B., [Monteiro-Oliveira, R.](#), Cypriano, E. S., 2020, MNRAS, 495, 2022
Simulations of gas sloshing induced by a newly discovered gas poor substructure in galaxy cluster Abell 1644

- 9 [Monteiro-Oliveira, R.](#), Doubrava, L., Machado, R. E. G., Lima Neto, G. B., Molina, M. C.; Cypriano, E. S., 2020, MNRAS, 495, 2007
Revising the merger scenario of the galaxy cluster Abell 1644: a new gas poor structure discovered by weak gravitational lensing
- 8 Mendes de Oliveira, C. L., + 118 authors, [Monteiro-Oliveira, R.](#), et al., 2019, MNRAS, 489, 241
The Southern Photometric Local Universe Survey (S-PLUS): improved SEDs, morphologies, and redshifts with 12 optical filters
- 7 Molino, A., Costa-Duarte, M.V., Mendes de Oliveira, C., Lima Neto, G. B., Cypriano, E. S., Sodr e Jr, L., Coelho, P., Chow-Mart inez, M., [Monteiro-Oliveira, R.](#), et al., 2019, A&A, 622, A178
J-PLUS: On the identification of new cluster members in the double galaxy cluster A2589 & A2593 using PDFs
- 6 Mahadev, P., [Monteiro-Oliveira, R.](#), Bagchi, J., Simionescu, A., Limousin, M., Raychaudhury, S., 2019, MNRAS, 482, 5093
A combined X-ray, optical and radio view of the merging galaxy cluster MACS J0417-1154
- 5 [Monteiro-Oliveira, R.](#), Cypriano, E. S., Vitorelli, A. Z., Ribeiro, A. L. B., Sodr e, L., Dupke, R., Mendes de Oliveira, C. L., 2018, MNRAS, 481, 1097
New insights on the dissociative merging galaxy cluster Abell 2034
- 4 Soja, A. C., Sodr e, L., [Monteiro-Oliveira, R.](#), Cypriano, E. S., Lima Neto, G. B., 2018, MNRAS, 477, 3279
A Gemini view of the galaxy cluster RXC J1504-0248: insights on the nature of the central gaseous core
- 3 [Monteiro-Oliveira, R.](#), Lima Neto, G. B., Cypriano, E. S., Machado, R. E. G., Capelato, H. V., Lagan a, T. F., Durret, F., Bagchi, J., 2017b, MNRAS, 468, 4566
Weak lensing and spectroscopic analysis of the nearby dissociative merging galaxy cluster Abell 3376.
- 2 [Monteiro-Oliveira, R.](#), Cypriano, E. S., Machado, R. E. G., Lima Neto, G. B., Ribeiro, A. L. B., Sodr e, L., Dupke, R., 2017a, MNRAS, 466, 2614
The merger history of the complex cluster Abell 1758: a combined weak lensing and spectroscopic view
- 1 Machado, R. E. G., [Monteiro-Oliveira, R.](#), Lima Neto, G. B., Cypriano, E. S., 2015, MNRAS, 451, 3309
Simulating the shocks in the dissociative galaxy cluster Abell 1758N

References

Prof. Eduardo S. Cypriano	Associate Professor University of S�o Paulo	eduardo.cypriano@iag.usp.br
Prof. Andr�e L. B. Ribeiro	Professor State University of Santa Cruz	albr@uesc.br
Prof. Rubens E. G. Machado	Professor Federal University of Technology Paran�a	rubensmachado@utfpr.edu.br
Prof. Yen-Ting Lin	Professor / Researcher Academia Sinica	ytl@asiaa.sinica.edu.tw