Rogério Monteiro-Oliveira *Ph.D.*

Observational Astrophysicist

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large scale structure assembly · galaxy clusters · superclusters of galaxies · galaxy evolution · weak gravitational lensing

ORCID · ADS · Google Scholar · ResearchGate · LinkedIn

Current Position

National Observatory (Observatório Nacional, ON/MCTI) 2025 –
Research fellow (Pesquisador Adjunto I) *Rio de Janeiro, Brazil*

State University of Santa Cruz (UESC) 2020 –
Member of the graduate program in Physics *Ilhéus, Brazil*

Work Experience

Academia Sinica Institute of Astronomy and Astrophysics (ASIAA) 2021 – 2025
Postdoc fellow *Taipei, Taiwan*
- Research, outreach

State University of Santa Cruz (UESC) 2020 – 2021
Visiting Professor *Ilhéus, Brazil*
- Teaching, research, outreach

University of São Paulo - Institute of Astronomy, Geophysics and Atmospheric Sciences (IAG/USP) 2020 – 2020
Assistant Professor *São Paulo, Brazil*
- Teaching

University of São Paulo - Institute of Astronomy, Geophysics and Atmospheric Sciences (IAG/USP) 2016 – 2020
Postdoc fellow *São Paulo, Brazil*
- Research, outreach

Federal University of Rio Grande do Sul - Astronomy Department of the Institute of Physics (IF/UFRGS) 2017 – 2018
Assistant Professor *Porto Alegre, Brazil*
- Teaching, research, outreach

Education

Ph.D. in Astronomy 2011 – 2016
University of São Paulo - Institute of Astronomy, Geophysics and Atmospheric Sciences (IAG/USP) *São Paulo, Brazil*
- Thesis: *Uma contribuição ao estudo de aglomerados de galáxias em fusão* (A contribution to the study of merging galaxy clusters)
- Advisor: Prof. Eduardo S. Cypriano
- Funded by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)

M.S. in Astronomy 2009 – 2011
University of São Paulo - Institute of Astronomy, Geophysics and Atmospheric Sciences (IAG/USP) *São Paulo, Brazil*
- Thesis: *Aglomerados de galáxias em fusão* (Merging galaxy clusters)
- Advisor: Prof. Eduardo S. Cypriano
- Funded by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)

B.S. in Physics 2022 –
University of São Paulo - Institute of Physics (IFUSP) *São Paulo, Brazil*
- Monograph: *Geografia e ecologia das galáxias em superaglomerados* (Geography and ecology of galaxies in superclusters)
- Advisor: Prof. Laerte Sodré Jr.

Major Collaborations

PFS Sumire 2022 –
Member

LSST 2021 –
Member

Javalambre Physics of the Accelerating Universe (JPAS) 2009 –
Member

Hyper Suprime Camera Survey 2021 – 2025
Member

Ultimate Subaru 2024 – 2025
Member

Community Service

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SOAR Telescope 2025 –
Member of the Brazilian Time Allocation Committee

International Journal of Machine Learning and Cybernetics 2024 –
Paper referee

HST Call for Proposals (Cycle 31) 2023
Reviewer

James C. Maxwell Telescope Time Allocation Committee 2022
Reviewer

The Astrophysical Journal 2019 –
Paper referee

Monthly Notices of the Royal Astronomical Society 2019 –
Paper referee

Accepted Proposals for Observation

PI

- Gemini (5.4 h @ GMOS/S): Testing Molecular Gas Scaling Relations in z 1.4 Galaxy Clusters with ALMA and Gemini. 2026.
- Subaru (2 h @ HSC): The Missing Clock in Cosmic Colliders: Dating Five Massive eRASS1 Mergers via Subaru/HSC Weak Lensing. 2026.
- Blanco (2.5 nights @ DECam): The Missing Clock in Cosmic Colliders: DECam Weak Lensing Calibration of Seven eROSITA Cluster Mergers. 2026.
- Blanco (1/2 night @ DECam): Decoding the Merger Dynamics of PSZ2 G277.93+12.34 with DECam. 2026.
- Blanco (1/2 night @ DECam): Mapping Dark Matter in a Rare, Complex Triple Radio Relic Cluster. 2025.
- Magellan/Clay (1 night @ MegaCam): Weak Lensing Follow-up of Massive Merging Clusters Recently Discovered by eROSITA All-Sky Survey Data Release 1. 2025.
- Magellan/Baade (1 night @ IMACS): Unveiling Dark Matter in Massive Merging Clusters Revealed by eROSITA All-Sky Survey Data Release 1. 2025.
- Subaru (7.3 h @ HSC): Mapping the dark matter distribution in highly massive merging clusters newly discovered by eROSITA. 2025.
- Magellan/Baade (1 night @ IMACS): Weak lensing mass reconstruction of a sample of highly disturbed merging clusters recently discovered by eROSITA. 2024.
- Blanco (1.5 nights @ DECam): Weak lensing mass reconstruction of a sample of highly disturbed merging clusters recently discovered by eROSITA. 2024.
- Magellan/Clay (0.5 night M2FS): Scaling up our understanding of large structure formation: connecting the BCGs to superclusters. 2023.
- CFHT (1.3 h @ WIRCam): Are high redshift ($z > 1.4$) galaxy cluster detections real? 2023.
- CFHT (2.6 h @ WIRCam): Breaking the natural barrier: detecting galaxy clusters at $z > 1.4$. 2022.
- CFHT (13.6 h @ MegaCam): Reconstruction of the mass field in Hercules supercluster using weak gravitational lensing. 2022.
- Gemini (28.5 h @ GMOS/S): Witnessing the formation of the large-scale structure: a dynamical study of massive galaxy clusters undergoing extreme mergers. 2021.
- Gemini (7.7 h @ GMOS/S): Imaging and spectroscopy of the merging galaxy cluster candidate SPT-CL J0411. 2017.
- Gemini (3.5 hours @ GMOS/S): Spectroscopy follow up of the merging galaxy cluster A2034. 2013.

Corresponding author

- Gemini (12.6 h @ GMOS/N): Do the BCGs born special or do they become it? PI: R. Dalal. 2023.
- Gemini (3.9 h @ GMOS/N): Witnessing the birth of a giant: spectroscopic observations of the merging galaxy cluster A1758S. PI: R. Machado. 2023.
- Blanco (1 night @ DECam): Investigating a bullet-like merging galaxy cluster caught in an early phase of interaction. PI: E. Cypriano. 2022.
- Gemini (22.9 h @ GMOS/N): First Characterization of Superclusters detected in the Subaru Hyper Suprime-Cam Survey. PI: R. Dalal. 2022.

Co-PI

- Gemini (14.1 h @ GMOS/S and 16.1 h @ GMOS/N): Dynamics of eROSITA Merging Clusters: Insights into Dark Matter and Galaxy Evolution. PI: R. Carrasco. 2026.
- JWST Cycle 3 (22.4 h @ NIRSPEC NIRCAM): Measuring the form of the IMF in passive galaxies at z = 1.2.
- Magellan/Baade (1 night @ FourStar): BCGs: Nature vs. Nurture? PI: R. Dalal. 2024.
- HST Cycle 30 (5 orbits @ ACS/WFC): Clash of Titans: Characterizing SPT-CLJ0307-6225, a major merger in the plane of the sky. PI: A. Zenteno. 2022.
- Gemini (5.5 h @ GMOS/S): A dynamical study of massive galaxy clusters at z > 0.6 undergoing extreme mergers. PI: R. Carrasco. 2022.
- Gemini (6.5 h @ GMOS/S): Follow-up of the newly discovered cluster J2305-2248, an “El Gordo” lookalike. PI: E. Cypriano. 2022.

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- MMT (1 night @ MMIRS): Exploration of star formation activity in galaxy clusters at $z \sim 1.5$. PI: Y.-T. Lin. 2022.
- Blanco (1 night @ DECam): Evolving galaxies in evolving environments: Searching for jellyfish galaxies in merging clusters. PI: K. Kelkar. 2022.
- GMRT (8 h): Diffuse radio emission from the sloshing cluster Abell 1644 and its connection to ram-pressure stripping. PI: K. Kelkar. 2022.
- CFHT (11.5 h @ MegaCam): Weak lensing mass reconstruction of the supercluster of galaxies SC0028-0001. PI: G. Lima Neto. 2010.

Student Adivising

Elvis Mello-Terencio 2026-
» Ph.D. student (ON/MCTI)
- Investigating the impact of weak lensing mass bias on determining the age of merging galaxy clusters

Giovanna Oliveira 2025-2026
» Undergraduate student (IFF; ON/MCTI)
- Gravitational Lensing with JWST: A New Era in Cosmic Mass Mapping

Ryusei Kano 2024
» Summer student program (ASIAA)
- The power of a semi-analytical 2-body description for describing galaxy cluster merger

Dionysios Gakis 2022
» Summer student program (ASIAA)
- Anatomy of a giant: investigating environment effects in the Saraswati supercluster

Vitor Hugo Yukio Fugivala 2022 - 2024
» Master's student (UESC)
- Structure and dynamics of the Hercules supercluster

Thierry Oliveira Candido 2019 - 2020
» Undergraduate student (Federal Institute of Mato Grosso do Sul)
- Mapping the Universe in large scale

Ronaldo Roca Flores 2019 - 2020
» Undergraduate student (Federal Institute of Mato Grosso do Sul)
- Mapping the Universe in large scale

Teaching

UESC 2020 - 2021
» Professor | 2 Physics courses

IAG/USP 2020
» Professor | 2 Astronomy courses

IF/UFRGS 2017 - 2018
» Professor | 5 Astronomy courses

IAG/USP 2012 - 2015
» Teaching assistant | 6 Astronomy courses

University Braz Cubas 2011
» Lecturer | 1 Physics course

Colloquia & Seminars

Federal University of Espírito Santo (Cosmo-UFES), Vitória, Brazil Oct., 2025
» Invited Seminar
- Extreme Cosmic Collisions: What Merging Galaxy Clusters Reveal About the Nature of Dark Matter?

Valongo Observatory (OV/UFRJ), Rio de Janeiro, Brazil Jun., 2025
» Invited Seminar
- Breaking the Dichotomy: MaNGA's Insights into Elliptical Galaxy Classification

Korea Astronomy and Space Science Institute (KASI), Daejeon, Korea Nov., 2024
» Invited Seminar
- A Review of Elliptical Galaxy Classification: Ruling Out the Dichotomy Scenario

National Institute of Physics, Quezon City, Philippines Oct., 2024
» Invited Seminar
- Merger of Galaxy Clusters: The Largest Particle Colliders in the Universe and Their Implications for Micro and Macro Physics

Istituto Nazionale di Fisica Nucleare, Turin, Italy Oct., 2023

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» Weekly Seminar
› Seeing the micro through the macro: collisions among galaxy clusters and their impact on dark matter properties investigation

National Central University, Taoyuan, Taiwan Oct., 2022
» Weekly Colloquia
› Connecting Macro to Micro: How can studying the largest structures in the universe help us unveil the nature of dark matter?

ASIAA, Taipei, Taiwan Nov., 2021
» Weekly Colloquium
› Galaxy Clusters: the Largest Laboratories in the Universe

UESC, Ilhéus, Brazil Jun., 2018
» Special Seminar
› Aglomerados de galáxias: os maiores laboratórios do Universo

Universidade Cruzeiro do Sul, São Paulo, Brazil May 2018
» Weekly Seminar
› C.S.I. (Cluster Science Investigation): solving the case of a cosmic crash

IF/UFRGS, Porto Alegre, Brazil Jun., 2017
» Weekly Seminar
› Unveiling the Universe dark side through the merging galaxy clusters

Conferences

2nd LSST Latin American Meeting Dec., 2025
Mexico City, Mexico — Linking Morphology and Kinematics: Can We Trust the Elliptical Galaxy Dichotomy? (oral contribution)

XLVIII Annual Meeting of the Brazilian Astronomical Society Sep., 2025
Caxambu, Brazil — Challenging the Dichotomy of Elliptical Galaxies with MaNGA (oral contribution)

Galaxy Memoirs: Inferring their Past from their Present Aug., 2025
Armação dos Búzios, Brazil — Revisiting Elliptical Galaxies: No Evidence for a Dichotomy (oral contribution)

11th KIAS Workshop on Cosmology and Structure Formation Oct., 2024
Gyeongju, Korea — No evidence of a dichotomy in the elliptical galaxy population (poster) & The impact of weak lensing mass bias on the kinematic description of merging galaxy clusters (oral contribution)

10th Galaxy Evolution Workshop Aug., 2024
Taipei, Taiwan — Can the dichotomy scenario explain the observed variety of elliptical galaxies? (oral contribution)

The Second SUPER-IRNET Workshop: Sparkling Our Collaboration at the Cosmic Gate Jul., 2024
Beppu, Japan — Breaking the natural barrier: how reliable is cluster detection beyond z = 1.4? (oral contribution)

Galaxy Groups in the Era of eROSITA and Euclid Jul., 2024
Sesto, Italy — From photons to bytes: combining multiple wavelengths and numerical simulations to describe the large scale structure formation (oral contribution)

First Structures in the Universe Jun., 2024
Paris, France — Are the detections of galaxy clusters at z > 1.5 real? (oral contribution)

Taipei Astronomy Workshop Jan., 2024
Taipei, Taiwan — Do normality tests serve as effective indicators for the dynamical state of galaxy clusters? (oral contribution)

Annual Meeting of the Physical Society of Taiwan Jan., 2024
Taoyuan, Taiwan — Beyond Hubble's Tuning Fork: is the classification of elliptical galaxies more complex than we thought?

A journey through galactic environments: From the halo assembly bias to the satellite quenching Sep., 2023
Porto Ercole, Italy — Is the taxonomy of early-type galaxies more complicated than we thought?

NECO school: science and methods for wide-field photometric and spectroscopic extragalactic and cosmological surveys Ago., 2023
Kyoto, Japan — Beyond Hubble's Tuning Fork: is the classification of elliptical galaxies more complex than we thought? (oral contribution)

Asia-Pacific Regional IAU Meeting (APRIM 2023) Aug., 2023
Koriyama, Japan — Is the classification of early-type galaxies more complex than we thought?

Asia-Pacific Regional IAU Meeting (APRIM 2023) Aug., 2023
Koriyama, Japan — the massive Saraswati supercluster going to disappear in the future?

Annual Meeting of the Astronomical Society of the Republic of China (Taiwan) May, 2023
Kaohsiung, Taiwan — Investigating the dichotomy among early-type galaxies

PFS Science meeting Mar., 2023
Remote — Is the dichotomy among early-type galaxies real?

9th Galaxy Evolution Workshop Feb., 2023
Kashiwa, Japan — Is the dichotomy among early-type galaxies real?

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Annual Meeting of the Astronomical Society of the Republic of China (Taiwan) Sep., 2022
Minxiong, Taiwan — A major galaxy cluster merger caught by eROSITA

Annual Meeting of the Physical Society of Taiwan Jan., 2022
Taipei, Taiwan — Witnessing the birth of the large-scale structure: anatomy and dynamical analysis of Hercules supercluster

Galaxy Cluster Formation II Jun., 2021
Remote — Peculiar features arising from merging galaxy clusters: the case of A1644 and A2034

JSPS-FAPESP Workshop on dark energy, dark matter, and galaxies Fev., 2019
São Paulo, Brazil — Merging galaxy clusters and the search for self-interacting dark matter (oral contribution)

SnowCluster - The Physics of Galaxy Clusters Mar., 2018
Salt Lake City, USA — Unveiling the dark side of the Universe through the merging galaxy clusters

ICTP-SAIFR School on Dark Matter Jul., 2016
São Paulo. Brazil

IAU General Assembly Meeting Aug., 2015
Honolulu, USA — The merging cluster Abell 1758: an optical and dynamical view

10th J-PAS Collaboration Meeting Mar., 2015
Paraty, Brazil — The merging cluster Abell 1758: adding new pieces into a complex puzzle

Cosmology with Galaxy Clusters Nov., 2014
Madrid, Spain — The merging cluster Abell 1758: adding new pieces into a complex puzzle

XXXVIII Annual Meeting of the Brazilian Astronomical Society Sep., 2014
Búzios, Brazil — The merging cluster Abell 1758

GMT Science Workshop Nov., 2013
São Paulo, Brazil — The merging cluster 1758

SnowCLUSTER: Physics of Galaxy Clusters Mar., 2013
Salt Lake City, USA — Dynamical Analysis of the Merging Cluster Abell 1758

USP Conference: Cosmology, large scale structure and first objects Feb., 2013
São Paulo, Brazil — The merging cluster 1758

XVI IAG/USP Advanced School on Astrophysics Nov., 2012
Itatiba, Brazil — The merging cluster Abell 1758

XXXVII Annual Meeting of the Brasilian Astronomical Society Oct., 2012
Águas de Lindóia, Brazil — The merging cluster Abell 1758

Growing up at high redshift: from proto-clusters to galaxy clusters workshop Sep., 2012
Madrid, Spain — A multi-technique analysis of the merging cluster Abell 1758

Science with LSST: A Brazilian/US joint workshop Apr., 2012
Campos do Jordão, Brazil — Merging galaxy clusters

South American Gemini Data Workshop Oct., 2011
São José dos Campos, Brazil — Merging galaxy clusters

XXXVI Annual Meeting of the Brazilian Astronomical Society Sep., 2011
Águas de Lindóia, Brazil — Merging galaxy clusters

XXXV Annual Meeting of the Brazilian Astronomical Society Sep., 2010
Passa Quatro, Brazil — Merging galaxy clusters

I Jayme Tiomno School of Cosmology Jul., 2010
Rio de Janeiro, Brazil — Merging galaxy clusters

Papers (published)

25. Chiu, I-N., Ghirardini, V., Grandis, S., Okabe, Bulbul, E., Bahar, Y. E., Balzer, F., Clerc, N., Comparat, J., Kleinebreil, F., Kluge, M., Liu, A., **Monteiro-Oliveira, R.**, et al., 2025, A&A, 704, A110. The SRG/eROSITA All-Sky Survey. The Weak-Lensing Mass Calibration and the Stellar Mass-to-Halo Mass Relation from the Hyper Suprime-Cam Subaru Strategic Program

24. Okabe, N., Reiprich, T., Grandis, S., Chiu, I-N., Oguri, M., Umetsu, K., Bulbul, E., Bahar, E., Balzer, F., Clerc, N., Comparat, J., Ghirardini, V., Kleinebreil, F., Kluge, M., Liu, A., Lin, Y-T., **Monteiro-Oliveira, R.**, et al., 2025, A&A, 700, A46. The SRG/eROSITA All-Sky Survey : Subaru/HSC-SSP weak-lensing mass measurements for the eRASS1 Galaxy Clusters

23. **Monteiro-Oliveira, R.**, Lin, Y-T., Chen, W-H., Chuang, C-Y., Abdurro'uf, Wu, P-F., 2025, ApJ, 988, 138. No Evidence of a Dichotomy in the Elliptical Galaxy Population

22. Zenteno, A., Kluge, M., Kharkrang, R., Hernandez-Lang, D., Damke, G., Saro, A., **Monteiro-Oliveira, R.**, et al., 2025, A&A, 698, A171. The dynamical state of eROSITA clusters and its impact on the brightest cluster galaxy luminosity

21. Ding, J., Dalal, R., Sunayama, T., Strauss, M. A., Oguri, M., Okabe, N., Hilton, M., **Monteiro-Oliveira, R.**, Sifón, C., Staggs, S. T., 2024, MNRAS, 536, 572. Miscentring of optical galaxy clusters based on Sunyaev-Zeldovich counterparts

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20. Chen, T-C., Lin, Y-T., Schive, H-Y., Oguri, M., Chen, K-F., Okabe, N., Ali, S., Bottrell, C., Dalal, R., Koyama, Y., **Monteiro-Oliveira, R.**, et al., 2024, ApJ, 975, 200. A Systematic Search of Distant Superclusters with the Subaru Hyper Suprime-Cam Survey

19. Machado, R. E. G., Volert, R. C., Albuquerque, R. P., **Monteiro-Oliveira, R.**, Lima Neto, G. B., 2024, ApJ, 970, 160. Simulating the Arrival of the Southern Substructure in the Galaxy Cluster Abell 1758

18. Albuquerque, R. P., Machado, R. E. G., **Monteiro-Oliveira, R.**, 2024, MNRAS, 530, 2146. Unravelling the collision scenario of the dissociative galaxy cluster Abell 56 through hydrodynamic simulations

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.**, Doubrawa, 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., Sodré Jr, L., Coelho, P., Chow-Martínez, 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., Sodré, 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., Sodré, 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 filaments

3. **Monteiro-Oliveira, R.**, Lima Neto, G. B., Cypriano, E. S., Machado, R. E. G., Capelato, H. V., Laganá, 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., Sodré, 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

Conference Proceedings

3. **Monteiro-Oliveira, R.** Is the taxonomy of early-type galaxies more complicated than we thought? A Journey Through Galactic Environments: From the Halo Assembly Bias to the Satellite Quenching, 2023.

2. Fugivala, Vitor H. Y., **Monteiro-Oliveira, R.**, Ribeiro, A. L. B. Mapping the Hercules supercluster to understand large scale structure formation and environmental effects on galaxies. Proceedings of XLV Meeting of Brazilian Astronomical Society. 2022.

1. **Monteiro-Oliveira, R.** Peculiar features arising from merging galaxy clusters: the case of A1644 and A2034. Galaxy Cluster Formation II. 2021.

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Papers (submitted)

3. Tam, S-I, Umetsu, K., Amara, A., Eckert, D., Regamey, M., Cerardi, N., Chiu, I-N., Sereno, M., Pacaud, F., Bhargava, S., Garrel, C., Gastaldello, F., Koulouridis, E., Maughan, B., **Monteiro-Oliveira, R.**, et al., 2026. Submitted to ApJ. Simulation-Based Cosmological Mass Calibration of XXL Galaxy Clusters using HSC Weak Lensing
2. Shimakawa, R., Shirasaki, M., Nishizawa, A.J., Osato, K., Horowitz, B., Galárraga-Espinosa, D., Verza, G., Pisani, A., Kashikawa, N., **Monteiro-Oliveira, R.**, et al., 2026. Submitted to MNRAS. Wide-field projected density mapping out to z=1.2 using the HSC-SSP Final Data Release and validation with early PFS-SSP Cosmology data
1. **Monteiro-Oliveira, R.**, 2026. Submitted to Universe. Merging Galaxy Clusters and the Search for New Physics of Dark Matter: A Review

Referees

Eduardo S. Cypriano Associate Professor IAG/USP eduardo.cypriano@iag.usp.br
André L. B. Ribeiro Full Professor UESC albr@uesc.br
Rubens E. G. Machado Associate Professor IAG/USP rubensmachado@usp.br
Yen-Ting Lin Research Fellow ASIAA ytl@asiaa.sinica.edu.tw

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