Robert Monjo

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EMPLOYMENT

2025- Adjunct lecturer, Department of Quantitative Methods, CUNEF Universidad

EDUCATION

2012 PhD in Physics, Universitat de Valencia, Dep. Earth Physics & Thermodyn.
2024 PhD in Mathematics, Universidad Complutense de Madrid, Dep. Algebra, Geometry and Topology
2017 MSc in Theoretical Physics, Universidad Complutense de Madrid, Dep. Theoretical Physics I and II
2017 MSc in Advanced Mathematics, Universidad Complutense de Madrid, Faculty of Mathematical Sciences
2007 Degree in Physics, Universitat de Valencia

FIELDS OF INTEREST

Mathematical Physics, applied to Climatology/Meteorology and General Relativity / Cosmology, Geometrization of Physics

PUBLICATIONS

Monjo R. (2025). Weak mixing angle under U(1,3) colored gravity. *JHEP* **2025**, 207. DOI: 10.1007/JHEP06(2025)207

Monjo R. (2025) Hydrostatic equilibrium constraints in X-COP galaxy clusters. *ApJ* **981**, *195*. DOI: 10.3847/1538-4357/adb723

Monjo R. (2025) Comparison of HMG and flat rotation velocities inferred from galaxy-galaxy weak lensing. *ApJ* **982**, 70. DOI: 10.3847/1538-4357/adb8d7

Galiano, L.; Monjo, R.; Royé, D.; Martin-Vide, J. (2025): Will the world experience more fractal droughts? *Atmos Res* **316**, 107941 DOI: 10.1016/j.atmosres.2025.107941

Redolat, D.; Monjo, R. (2024): Statistical predictability of Euro-Mediterranean subseasonal anomalies: The TeWA approach. *Weather Forecast* **39**, 899–914. DOI: 10.1175/WAF-D-23-0061.1

Monjo R., Rodríguez-Abella Á., Campoamor-Stursberg R. (2024). From colored gravity to electromagnetism. *Gen Rel Grav* **56**, 117. DOI: 10.1007/s10714-024-03307-8

Monjo R. (2024). What if the universe expands linearly? A local general relativity to solve the "zero active mass' problem. *ApJ* **967**, 66. DOI 10.3847/1538-4357/ad3df7

SELECTED ACADEMIC HONOURS AND GRANTS

His research career has been recognized with two awards: the 2021 "Roser Majoral Moliné" Award and the 2009 "Eduard Fontserè" State Meteorology Award, for his theoretical development of measurements in complex systems (fractal theory) applied to meteorology.

SELECTED PRESENTATIONS

CONFERENCES

Monjo, R. (2024): Beyond dark matter: Constraining hyperconical-relativistic MOND-like model to galaxy cluster RAR observations. *Spanish and Portuguese Relativity Meeting* (EREP 2024), 24 July, 2024

Monjo, R. (2024): Beyond the standard model: From coasting cosmology to MOND-like gravities. *First meeting on Challenges of Modern Cosmology*, 18 January, 2024.

Monjo, R. (2023): Hyperconical universe and finite spacetime. *Third Hermann Minkowski Meeting on the Foundations of Spacetime Physics*, 11-15 Sep 2023. Varna, Bulgaria

Monjo, R. (2023): Covariant formulation of MOND from hyperconical metrics and observational constraints. *Cosmology*, 28 August 2023 to 2 September 2023, SISSA Building, Miramare, Trieste, Italy

SEMINARS

Monjo, R. (2025): Gravedad coloreada y estructura del espacio-tiempo [física de partículas]. L'Astronòmica de Sabadell, 22 de enero de 2025, Sabadell, Barcelona.

Monjo, R. (2024): Gravedad Modificada como alternativa a la materia y energía oscuras. Agrupación Astronómica de Madrid (AAM), 18-September 2024, Madrid.

PROFESSIONAL ACTIVITIES

2010-Present	Climate Research Foundation – FIC
2024-Present	Saint Louis University, Department of Math and Computer Sciences
2025-2025	Universidad de Alcalá, Department of Physics and Mathematics
2018-2024	Universidad Complutense Madrid, Dep. Algebra, Geometry and Topology
2008-2010	Sea and Food Research Technology Centre, AZTI-Tecnalia.
2006-2008	Universitat de València, Department of Physics of the Earth and Thermodynamics