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JAIME MERINO Professor [Strongly Correlated Systems](#)

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Biographical Info

Jaime Merino received his Ph.D from Universidad Autónoma de Madrid in 1997. After postdoctoral research work at Brown University (USA) (1997-1998), University of New South Wales and University of Queensland (Australia) (1998-2001) and the Max-Planck Institute for Solid State research in Stuttgart (Germany) (2001-2003) he joined the Condensed Matter Theory Department at Universidad Autónoma de Madrid (UAM) as a Ramón y Cajal Fellow in 2003. He became a faculty member of the Condensed Matter theory department at UAM in 2010.

Research Interests

Jaime Merino is a theoretical condensed matter physicist currently working in the area of strongly correlated systems. His main research focuses on understanding the behavior of electronic systems in which Coulomb electron interactions. Some of the topics addressed includes the understanding of transport properties of strongly correlated metals, out-of-equilibrium quantum many-body theory, superconductivity in strongly interacting systems, charge ordering phenomena in low dimensional materials, deriving effective model Hamiltonians for strongly correlated systems, and STM spectroscopy of Kondo impurities on metal surfaces.

Relevant/Recent Publications

J. Merino, A. Ralko, and S. Fratini, "Emergent Heavy Fermion Behavior at the Wigner-Mott transition", Phys. Rev. Lett. 111, 126403 (2013). [\[URL\]](#)

J. Merino and O. Gunnarsson, "Origin of the pseudogap in cuprate superconductors from quantum cluster theories", J. Phys.: Condens. Matter 25, 052201 (2013). [\[URL\]](#)

L. Cano-Cortes, J. Merino, and S. Fratini, "Quantum critical behavior of electrons at

the edge of charge order”, Physical Review Letters, 105, 036405 (2010). [\[URL\]](#)

A. Liebsch, H. Ishida, and J. Merino, “Mott transition in two-dimensional frustrated compounds”, Physical Review B, 79, 195108 (2009). [\[URL\]](#)

J. Merino, M. Dumm, M. Dressel, N. Drichko and R. H. McKenzie, “Quasiparticles at the verge of localization near the Mott metal-insulator transition in a two-dimensional material”, Physical Review Letters 100 , (2008). [\[URL\]](#)

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