

**Speaker: Leni BASCONES (Material Science Institute of Madrid)**

**The “normal” state of magic angle twisted bilayer graphene**

The plethora of symmetry breaking transitions in twisted bilayer graphene and other graphene moiré heterostructures gives clear evidence of the importance of correlations in these systems. While the effect of correlations is more easily identifiable when they produce a phase transition to an ordered state, research in other strongly correlated electron systems has shown that the non-ordered, so-called “normal”, state can be also strongly modified by such correlations. Specifically, a notable spectral weight reorganization can produce highly anomalous temperature and doping dependencies in transport, optical or STM measurements and even control the phase transitions which take place. In the talk I will discuss the strong spectral weight reorganization produced by the electronic correlations in twisted bilayer graphene and how much it depends on the proximity to the magic angle. The “normal” state of graphene moirés is everything but normal.