



## Seminar/Talk

# Magnetism and superconductivity in rhombohedral trilayer graphene

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Twisted bilayer graphene has emerged as an incredible system where energy bands can be made effectively flat by tuning the twist angle. This resulted in observation of symmetry broken phases and superconductivity in twisted graphene systems. Unfortunately the band structure of those systems is quite cumbersome and hard to analyze theoretically for interaction effects. It turns out similar experimental signatures can be obtained even when the band is not completely flat, but the bandwidth is reduced considerably for a large range of momenta. This can be achieved by just stacking three layers of graphene in rhombohedral configuration. In this talk I will present the recent observation of magnetism and superconductivity in trilayer rhombohedral (ABC) graphene. I will show that a simple Stoner model is capable of capturing the main features of the interacting phase diagram. Finally, I will also discuss the possible origin of the superconductivity based on the Kohn-Luttinger mechanism, which only relies on electron-electron interaction and does not require the presence of phonons as mediators of the Cooper pairs.

**Tuesday, November 2, 2021 11:00am - 12:00pm**

Heinzel Seminar Room / Office Bldg West (I21.EG.101)



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