

In this talk, i will present our results on the bulk conductance of ballistic graphene transistors driven by a circularly polarized electromagnetic wave (typically in the THz range). The differential conductance is calculated as a function of the carrier density (of the non irradiated graphene) and driving strength.

We focus on the doped regime where strong suppressions of the bulk conductance are obtained for several broad ranges of doping. These conductance dips are related to emergent gaps in the Floquet quasi-energy spectrum, leading to a transport dominated by evanescent waves in the conduction channel of the transistor. Besides, in the undoped regime, we have also studied the so-called minimum conductance of irradiated graphene-based transistor.

References

- [1] J. Atteia, J.H. Bardarson, and J. Cayssol, arXiv:1709:00090