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Short range disorder in Graphene: A Green's function based approach[1] SANKALPA GHOSH[2], Physics Department, IIT Delhi, New Delhi-110016, India, NEETU AGGARWAL (GARG), MANISH SHARMA, Center for Applied Research in Electronics, IIT Delhi, New Delhgi-110016, India — Electrons at the Fermi level in graphene monolayer behave like massless Dirac fermions. Using Greenís function based technique we study the transport of such electrons in the presence of randomly located electrostatic impurities in different geometries and compare such transport in graphene with the transport in conventional semiconductors. This study would eventually be used to mimic short range disorder that would be superimposed on a regular structure. Comparison with the optical phenomena will be used to understand such transport. We further extend this technique to study the transport in the presence of magnetic scatterers.

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