



Contribution ID: 438

Type: **Talk**

Numerical simulation of graphene in an external magnetic field

Thursday, 26 June 2014 16:15 (20 minutes)

The results of numerical simulation of graphene effective field theory in external magnetic field are presented. The numerical simulation is performed using noncompact $(3+1)$ -dimensional Abelian lattice gauge fields and $(2+1)$ -dimensional staggered lattice fermions. The dependences of fermion condensate and conductivity on the dielectric permittivity of the substrate for different values of external magnetic field are calculated. It is found that magnetic field shifts insulator-semimetal phase transition to larger values of the dielectric permittivity of the substrate. The phase diagram of graphene in external magnetic field is drawn.

Primary author: Mr VALGUSHEV, Semen (Institute for Theoretical and Experimental Physics)

Presenter: Mr VALGUSHEV, Semen (Institute for Theoretical and Experimental Physics)

Session Classification: Application beyond QCD

Track Classification: Applications Beyond QCD