



Friday March 7th, 2014
4:10 – 5:00 pm, EPS108

“Superconductivity from repulsive interaction”

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Abstract:

The BCS theory of superconductivity, for which the Nobel Prize was given in 1972, named electron-phonon interaction as a glue that overcomes Coulomb repulsion and binds fermions into pairs which then condense and super-conduct. I review recent and not so recent works aiming to understand whether a nominally repulsive Coulomb interaction can by itself give rise to a superconductivity. I first discuss a generic scenario of the pairing by electron-electron interaction, put forward by Kohn and Luttinger back in 1965 and then move on to discuss modern studies of the electronic mechanisms of superconductivity in the cuprates, Fe-pnictides, and doped graphene.

Host:

Anton Vorontsov

****Refreshments served in the EPS second floor lobby at 3:45****
