Density functional theory for materials properties

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In this talk, I will review the fundamental basis of the density functional theory (DFT). Nowadays, we can call DFT as the main computational method for the prediction material properties from first principles. That is why the questions about the limits of applicability of this theory are of general interest. Special attention will be given to the DFT models of warm dense matter and to the DFT models of strongly correlated systems.