

Philosophy of DFT: How can we accurately calculate physical quantities from first principles?

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After making a brief summary of this workshop/symposium, I will explain basic concepts and ideas of the density functional theory (DFT) behind the theorems like Hohenberg-Kohn and Kohn-Sham with emphasis of the difference between DFT and other conventional many-body theories such as the Green's-function approach. As an application of those ideas, I will discuss the formulation of DFT for superconductors (SCDFT) in comparison with the extension of DFT to treat time-dependent phenomena (TDDFT).