Theoretical study of correlation effects in condensed-matter systems

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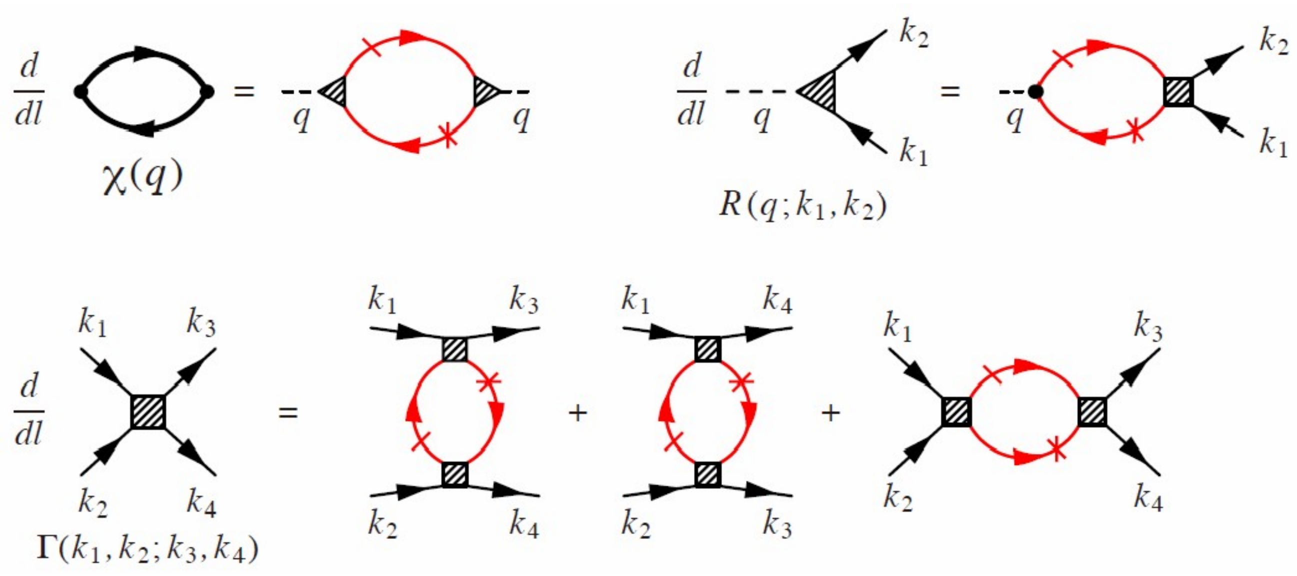

Renormalization-group equations

In transition-metal compounds and molecular conductors, various exotic electronic states, such as high-Tc superconducting states, are realized because of the strong correlation between electrons. The aim of my research is to elucidate the basic principles behind these phenomena theoretically. Especially, I am working on developing a new scheme of the “renormalization-group method” which can treat the higher-order many-body correlation effects.

Keywords： Condensed matter theory; Strong correlation; Renormalization-group method