In this talk we consider Leavitt path algebras and graph $C^*$-algebras, and we discuss various relationships between the algebras in these two classes. We describe how the Leavitt path algebra $L_C(E)$ is canonically isomorphic to a dense $*$-subalgebra of $C^*(E)$, discuss the implications of this imbedding, and examine a number of similar results for these two classes. We shall also discuss the problem of lifting and restricting isomorphisms between graph algebras, and consider two questions: (1) If $L_C(E)$ and $L_C(F)$ are isomorphic as rings, does it follow that $C^*(E)$ and $C^*(F)$ are isomorphic as $C^*$-algebras? and (2) If $L_C(E)$ and $L_C(F)$ are Morita equivalent as rings, does it follow that $C^*(E)$ and $C^*(F)$ are Morita equivalent as $C^*$-algebras? (Received September 18, 2009)