In this talk, I will talk about the accuracy and stability of partially and fully implicit schemes for phase field modeling. Through theoretical and numerical analysis of Allen-Cahn and Cahn-Hillard models, we investigate the potential problems of using partially implicit schemes, demonstrate the importance of using fully implicit schemes and discuss the limitation of energy stability that are often used to evaluate the quality of a numerical scheme for phase-field modeling. We will discuss some important properties of phase-field models, such as unconditional stability, the discrete maximum principle, adaptivity and fast solvers. (Received August 18, 2018)