A Case History of the Supernova Engine, the Growing Set of Observational Clues

It has long been believed that convective instabilities play an important role in the core-collapse supernova engine. In particular, a growing set of theorists believe that the convection above the newly formed neutron star plays an important role in converting the gravitational energy released during the collapse of the core into explosion energy of a normal supernova. However, a number of other possible engines have been proposed. Dr. Fryer will review this standard engine mechanism and compare predictions of this engine to the growing set of observational clues into the supernova engine.