## Abstract

We report some recent joint work with Biao Ma on some general type PDEs in Kahler geometry. Following recent progress on the J-equation and its extensions by Guan, Székelyhidi, G. Chen, Datar-Pingali and others, we pose PDEs of more general types and give some natural conditions. We relate the solvability to the existence of sub-solutions and eventually some algebraic stability conditions. We report some applications, including special cases of deformed Hermitian Yang Mills equation.