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Green's functions and complex Monge-Ampere equations

The classical Green's function plays an important role in function theory of one complex variable or two real variables. In higher dimensions, from the point of view of complex analysis, its proper generalization is as the pluricomplex Green's function, which is a solution of a complex Monge-Ampere equation with a Dirac mass. We discuss the geometric properties of pluricomplex Green's functions, as well as methods for solving such Monge-Ampere equations, with emphasis on a priori estimates, geometric constructions, and the differences with real Monge-Ampere equations.