On the mean value formula for harmonic functions

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The mean integral of harmonic functions on a ball is equal to the value of the functions at the center of the ball. This is the well known Gauss mean value formula for harmonic functions. This formula is "stable" and provides a harmonic characterizion of balls. In the talk I will discuss these and related results, obtained in collaboration with E. Lanconelli and with N. Fusco, E. Lanconelli, X. Zhong.