Ann. Scuola Norm. Sup. Pisa Cl. Sci. (5) Vol. VII (2008), 545-577

Taylorian points of an algebraic curve and bivariate Hermite interpolation

LEN BOS AND JEAN-PAUL CALVI

Abstract. We introduce and study the notion of Taylorian points of algebraic curves in \mathbb{C}^2 , which enables us to define intrinsic Taylor interpolation polynomials on curves. These polynomials in turn lead to the construction of a well-behaved Hermitian scheme on curves, of which we give several examples. We show that such Hermitian schemes can be collected to obtain Hermitian bivariate polynomial interpolation schemes.

Mathematics Subject Classification (2000): 41A05 (primary); 41A63, 46A32, 14Q05 (secondary).