

## ON HERMITE INTERPOLATION IN $R_d^*$

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**Abstract.** In this article, we deal with the problem of “Minimal Hermite Interpolation.” That is, given a number  $k$  of distinct points in  $R_d$  and the values of several derivatives at this point, we want to find a subspace of minimal dimension, where this interpolation problem has a solution, independent of the choice of points. In Section 2, we present some results on such subspaces in the particular cases of two points and some or all partial derivatives of the first order. In Section 3, we obtain some general upper bounds on the dimension of interpolation subspaces.

**Key words.** Hermite interpolation, Lagrange interpolation.

**AMS subject classifications.** 41A05, 41A63, 65D05.

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\*Received September 26, 2003. Accepted for publication January 13, 2004. Recommended by Richard Varga.

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