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ON HERMITE MULTIVARIATE INTERPOLATION

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Abstract. The Hermite interpolation problem given by the set of conditions $\Lambda = \{\lambda_{j,k} : j = 1, \dots, m; k = 0, \dots, l_j - 1\}$, with $\lambda_{j,k} = \delta_{x_j} \circ q_{j,k}(D)$, $q_{j,k} = x^{\alpha_{j,k}}$, $\alpha_{j,k} \in N^2$, $x \in R^2$, $Q_j = \text{span}\{q_{j,k} : k = 0, \dots, l_j - 1\}$ is D -invariant, $\sum_{j=1}^m l_j = N$ is studied. In order to obtain a Newton form for the interpolant, three divided differences are introduced. Some results related to these divided differences are given.

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