Subresultants and Symmetric Interpolation

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In 1853, Sylvester introduced double sum expressions for two finite sets of indeterminates and subresultants for univariate polynomials, showing the relationship between both notions in several but not all cases. Here we show how Sylvester’s double sums can be interpreted in terms of symmetric multivariate Lagrange interpolation, allowing to recover in a natural way the full description of cases. We will also report on preliminary results on extensions to symmetric multivariate Hermite interpolation.