Determinantal representations of smooth cubic surfaces
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Abstract: A determinantal representation of a homogeneous polynomial $p(x_0, \ldots, x_n)$ (or a hypersurface it defines) is given by matrices A_i such that $\det(\sum_{i=0}^{n} A_i x_i) = p(x_0, \ldots, x_n)$. We will discuss their existence and parametrization. Special emphasis will be on determinantal representations of smooth cubic surfaces.