Variances of higher-dimensional data sets

Given a data set $\mathcal{D} = \{x_1, \ldots, x_N\}$, $x_n \in \mathbb{R}^D$, we compute the variance of the data set as

$$\mathbb{V}[\mathcal{D}] = \frac{1}{N} \sum_{n=1}^{N} (x_n - \mu)(x_n - \mu)^\top \in \mathbb{R}^{D \times D}$$

where $\mu \in \mathbb{R}^D$ is the mean value of the data set.