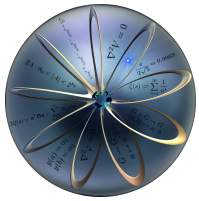

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Taylor's formula for matrix functions

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Let p be a polynomial and suppose $\mathbf{A}$ and $\mathbf{B}$ commute, i.e. $\mathbf{AB} = \mathbf{BA}$, then

$$p(\mathbf{A} + \mathbf{B}) = \sum_{k=0}^{n} \frac{1}{k!} p^{(k)}(\mathbf{A})\mathbf{B}^k.$$

where $n = \deg(p)$.