High order Ito-Taylor Expansions

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We propose Ito-Taylor truncated expansions about a point for sufficiently smooth functions $f(t, X_t)$ where X_t is a solution of a stochastic differential equation. The expansions are power expansions in $(t - t_0)$ and $X_t - X_{t_0}$. This property make more easy to compute the order of a numerical method for Stochastic differential equations. Finally, we obtain new Runge-Kutta methods using this expansions.