

# **An Asymptotic Expansion Approach in Finance**

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This presentation reviews recent results of an asymptotic expansion approach to numerical problems for pricing and hedging derivatives. In particular, expansions around a normal and a log-normal distributions are considered. As examples, the approximations for the Lambda-SABR model and a cross-currency Libor market model with a general stochastic volatility model of the spot foreign exchange rate are presented. Also applications to an implied volatility expansion and to pricing average and barrier options are shown.