

On the link between the implied volatility skew and the Malliavin derivative operator

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In this talk, we use Malliavin calculus techniques to obtain an expression for the short-time behavior of the at-the-money implied volatility skew. This expression depends on the derivative of the volatility in the sense of Malliavin calculus. We will show that this result can be useful in applications, as in modeling problems or in option pricing approximation.