From implied to spot volatilities

Abstract. This talk is concerned with the link between implied volatilities and the spot volatility. Such a link is of great practical interest since it relates the fundamental quantity for pricing derivatives (the spot volatility) which is not observable, to directly observable quantities (the implied volatilities). We first motivate our work by some examples. Then, we explain how the dynamics of the spot volatility and that of the implied volatility surface relate to each other. Finally, we discuss some practical implications.