

## Multilevel function approximation II: SDE analysis

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Special session: Multilevel methods for function approximation

This talk extends the analysis of the previous talk to cases in which each function evaluation corresponds to expected value of a functional of the solution of an SDE. The analysis covers two cases, one in which the SDE solution can be simulated exactly, giving exact sample values for the functional of interest, and the second in which numerical approximation of the SDE is required. In both cases the analysis is relatively straightforward when the functional is smooth, but is significantly harder when the functional is Lipschitz or discontinuous, as is often the case in computational finance.