Talk 11: Christian Bayer (Weierstraß-Institut Berlin)

Title: Path signature methods for pricing of Bermudan options

Abstract. Path signatures provide provide a powerful tool for solving stochastic optimal control problems in non-Markovian models, in particular enabling the pricing of American options under rough volatility. In this talk, we discuss classical primal and dual approaches extended to rough volatility models with the help of the signature transform, as well as a further approach based on the signature kernel. We demonstrate and compare the performance within the popular rough Heston and rough Bergomi models. Joint work with Luca Pelizzari and Jia-Jia Zhu.