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Title: Polynomial Term Structure Models

Abstract: Polynomial term structure models are pricing models based on polynomial preserving factor processes. These are defined as jump-diffusions whose extended generator leaves the space of polynomials of any fixed degree invariant. In conjunction with a state price density modeled as a polynomial function of the state, this property can be exploited to yield flexible pricing models, where many key quantities are available in closed form. In this talk I will focus on the term structure of interest rates and swap rates, and show how swaption prices can be computed efficiently. The theoretical results will be complemented with empirical calibration based on market data. This talk is based on joint work with Damir Filipović and Anders Trolle.