



A heat kernel approach to new Interest Rate Models

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ABSTRACT

We present a variant of the potential approach as described for instance by Chris Rogers in order to construct new classes of interest rate models. The goal is to derive tractable interest rate models for general factor processes and to understand "natural scales" for certain factor processes such as Lévy processes. Our class also contains the class of affine models. Several numerical implementations of interest rate models driven by Cauchy or Gamma processes are presented, too. (This is joint work with Jiro Akahori, Thomas Steiner, Josef Teichmann, Takahiro Tsuchiya).