

A heat kernel approach to interest rate models.

(joint work with Y. Hishida, J. Teichmann, and T. Tsuchiya)

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We construct interest rate models in the spirit of the well-known Markov functional models: our focus is analytic tractability of the models and generality of the approach. We work in the setting of state price densities and construct models by means of the so called propagation property. The propagation property can be found implicitly in all of the popular state price density approaches, in particular heat kernels share the propagation property (wherefrom we deduced the name of the approach). As a related matter, an interesting property of heat kernels is presented, too.