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06269-3009. *Estimates for the resolvent kernel of the Laplacian on p.c.f. fractals.*

Building on recent work with Ionescu, Pearse, Ruan and Strichartz, I will describe a method for using an explicit formula for the resolvent kernel of the Laplacian on a pcf fractal to obtain sub-Gaussian estimates for this kernel. These coincide with those that may be computed in a half-plane from the heat kernel estimates of Hambly and Kumagai, but have a larger domain of validity, as they hold on any sector of the complex plane that omits the ray containing the Laplacian eigenvalues. In particular they may be used to recover the heat kernel estimates. (Received September 14, 2009)