Fractal Strichartz estimate for the wave equation

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We consider Strichartz estimates for the wave equation with respect to general measures which satisfy certain growth condition. In $\mathbb{R}^{3+1}$ we obtain the sharp estimate and in higher dimensions improve the previous results.

Since the space-time Fourier transform of a solution of the wave equation is supported in the forward and backward light cone, the Strichartz estimate we want is deduced by Littlewood-Paley decomposition, Planchrel theorem, and a sort of Fourier restriction theorem. In this talk, we discuss the bilienar approach which are extensively exploited in study of Fourier restriction problem. We also examine sharpness of the estimate.