

The evolution of vortex filaments with corners

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I shall present some recent results obtained in collaboration with V. Banica and F. de la Hoz about the evolution of vortex filaments according to the so-called binormal law. After reviewing the results for filaments with one corner, we will look at the case of general polygons. The dynamics turn out to be quite complex. Among other things numerical evidence on the appearance of multifractals will be given. This multifractal structure turns out to be connected to the one proved by S. Jaffard on Riemann's non-differentiable function.