

NOISE/REGIME/STRUCTURE

The Singularity-Scale Micro-Telescope

Random Walks (monofractal) with different correlations

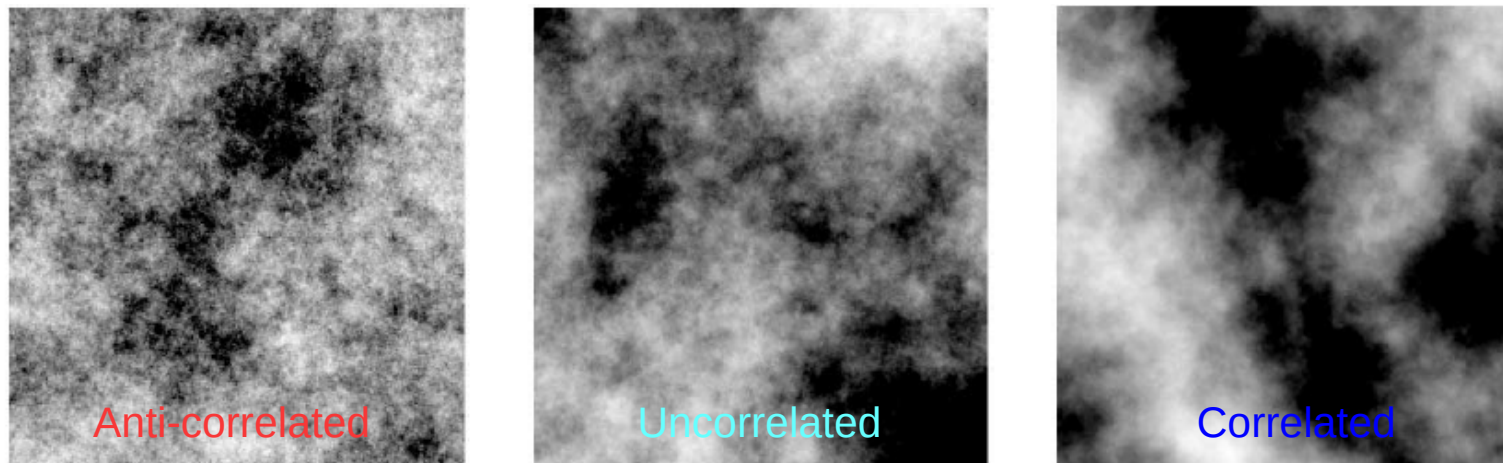
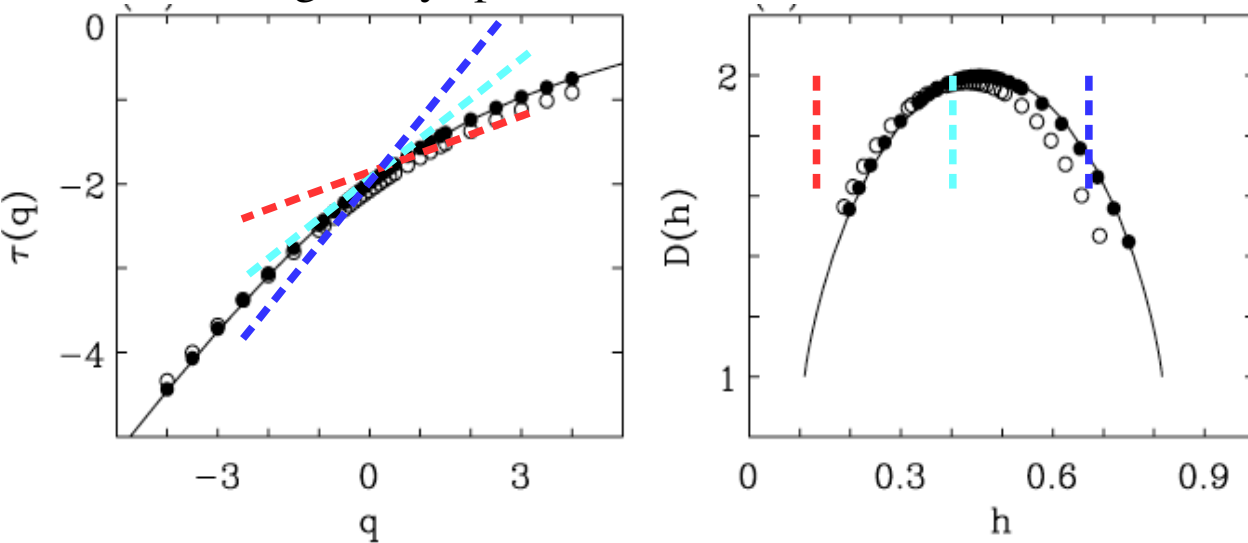
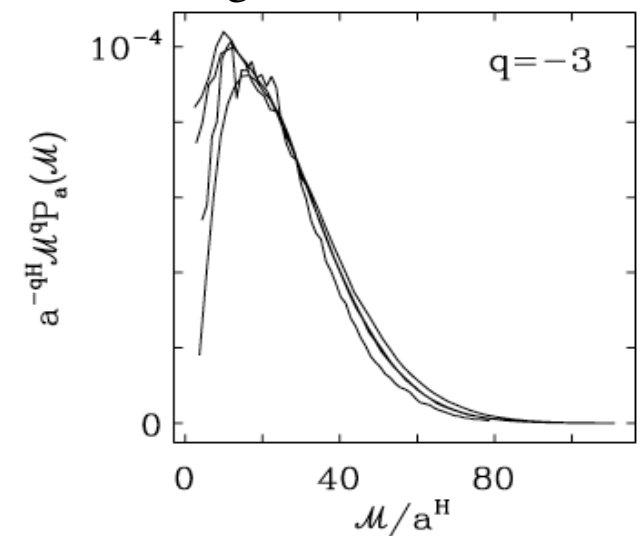


FIG. 3.—The fBm surfaces $B_H(x)$ generated with the Fourier transform filtering synthesis method. *Left:* $H = 0.2$. *Middle:* $H = 0.5$. *Right:* $H = 0.8$.

Singularity spectra : mono vs multifractal



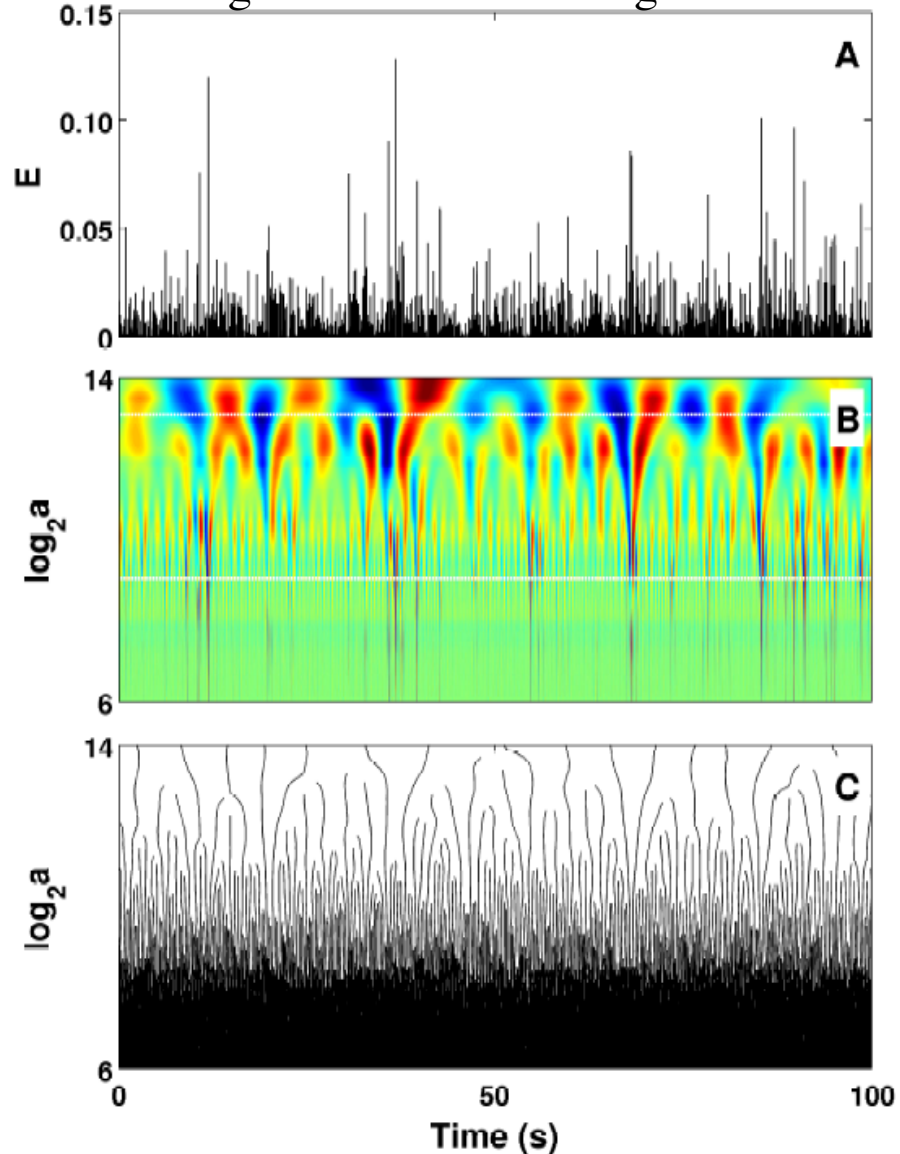
Rescaling of PDF tails : Kernels



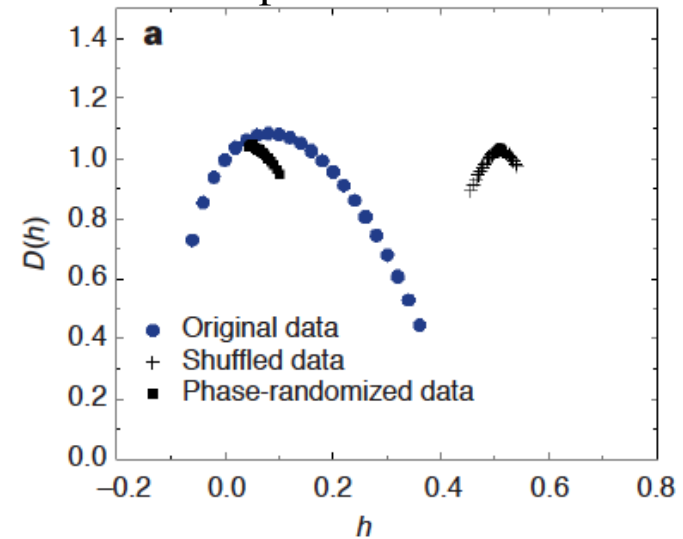
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The Singularity-Scale Micro-Telescope

1D wavelet based
scalogram detection of singularities



Shuffled data /
Fourier phase randomized



Scale inference of
Cascade/ No Cascade (same spectrum)

