

# CORRELATION STRUCTURE OF DYNAMICAL TURBULENT CASCADES

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Multiplicative branching processes are able to model phenomenologically several facets of the inertial range energy cascade in fully developed Navier-Stokes turbulence like, for example, intermittency and multiscaling. Since, by construction, these models are stochastic and geometrical, but do not involve a dynamical evolution, their relationship to the Navier-Stokes dynamics remains unclear. We present a generalisation of these models, which keeps stochasticity, but introduces a causal space/time evolution. Equal-time  $n$ -point correlation functions exhibit perfect multiscaling; other, experimentally relevant observables are also discussed.