Interval-Partition Evolutions and Stochastic Flows

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Abstract:

We investigate a pair of coupled stochastic squared Bessel flows that are parametrized by $\delta \in (0, 2)$ and establish a partition of the space-time plane $\mathbb{R}_+ \times \mathbb{R}$. We show that these partitions correspond to squared Bessel excursions with a negative parameter $-\delta$ which are naturally embedded within the jumps of a spectrally positive $(1 + \frac{\delta}{2})$ stable process. This connection further allows us to relate these structures to self-similar interval-partition evolutions.

Inviter: Wei Xu