

Institute for Applied Mathematics, Bonn University

Oberseminar Stochastik

Thursday, 30 June 2022, 13:00

Seminarraum LWK 0.011

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A spatially-dependent fragmentation process

We define a fragmentation process in which rectangles break up into progressively smaller pieces at rates that depend on their shape. Long, thin rectangles are more likely to break quickly, and are also more likely to split along their longest side. We are interested in the evolution of the system at large times: how many fragments are there of different shapes and sizes, and how did they reach that state? We give an almost sure growth rate along paths by studying an equivalent branching random walk with spatially dependent rates.

Based on a joint work with Matt Roberts (University of Bath).