

BERNOULLIS TAFELRUNDE

GRADUATE STUDENT SEMINAR

Monday October 5th 12:15-13:00

Virtual seminar

RAPHAEL ERB

Universität Basel

Feller Dynamics of Exchangeable Arrays

ABSTRACT

In my master thesis, I studied the behavior of random graphs that evolve over time. When viewing graphs not as graphs, but in terms of their adjacency matrix (or adjacency array, if the graph has infinitely many vertices), one can guess that results for random graphs can be generalized to results for arrays that permit more values than just 0s or 1s. Specifically, I studied the behavior of exchangeable Feller processes on infinite arrays with finitely many distinct entries. It is possible to characterize these processes in terms of jumps directed by a Poisson Point Process. I then attempted to extend that characterization to arrays that admit uncountably many different values. However, there are several significant roadblocks that disallow a straightforward generalization of the previous results. In this talk, I attempt to give a short overview of the concepts involved, from Exchangeability to Poisson Point Processes, present the characterization in the finite case and finally discuss some obstacles encountered in more general settings.