Asymptotic results for branching processes with immigration

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In the talk, we discuss the validity of functional limit theorems for critical branching processes with weakly dependent immigration. We consider the model of the branching process with immigration when the immigration rate depends on time. It turns out that when the immigration sequence satisfies some mixing conditions, our results extend the known results about independent immigration cases. Moreover, we also consider nearly critical branching processes with immigration, as well as partially observed branching processes.

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