

# Estimating the Division Kernel of a Size-Structured Population

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## Abstract

We consider a size-structured population which represents the cell division. We describe the population by an empirical measure and study the asymptotic behaviour of the measure. Then, we obtain a weak solution of a growth-fragmentation equation in the large population limit. Finally, we address the problem of estimating the division kernel (or fragmentation kernel) in both case of complete data and case of the stationary distribution approximation.

*Keywords:* size-structured population, growth-fragmentation equation, division kernel.

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