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Computing likelihoods under Lambda-coalescents

Abstract

We present and compare various importance sampling methods which allow to compute likelihoods of sequence data in the context of multiple merger coalescents, generalising results of Griffiths and Tavaré (1994), Stephens and Donnelly (2000) and Hobolth, Uyenoyama and Wiuf (2008) to the Lambda-case. We illustrate these methods using simulated and some real datasets. (joint work with Matthias Steinrücken and Jochen Blath, TU Berlin)