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# From flows of Lambda Fleming-Viot processes to lookdown processes via flows of partitions

Cyril Labbé

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We unify two well-known representations of Lambda Fleming-Viot processes: the stochastic flow of bridges and the lookdown process. We show that the stochastic flow of bridges can be uniquely decomposed into two new objects: the Eves process, which are the genetic types that play a significant r\^ole in the population as time passes, and a stochastic flow of partitions, which encodes the genealogical structure. We prove that the latter is completely equivalent with the so-called lookdown graph and so, we provide a pathwise connection between flows of bridges and lookdown processes: using the lookdown construction with that flow of partitions and the Eves, we recover pathwise the collection of Lambda Fleming-Viot processes encoded by the flow of bridges.

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