

Bertoin, Jean; Goldschmidt, Christina

Dual random fragmentation and coagulation and an application to the genealogy of Yule processes. (English) [Zbl 1064.60177](#)

Drmotá, Michael (ed.) et al., Mathematics and computer science III. Algorithms, trees, combinatorics and probabilities. Proceedings of the international colloquium of mathematics and computer sciences, Vienna, September 13–17, 2004. Basel: Birkhäuser (ISBN 3-7643-7128-5/hbk). Trends in Mathematics, 295-308 (2004).

In the first part the authors show that coagulation and fragmentation are inverse phenomena when Dirichlet and Poisson-Dirichlet processes are involved in a convenient way. They show in the second part that their dual fragmentation and coagulation chains are naturally connected to the genealogy of Yule processes after time-changing. They also consider the case of a continuous state Yule process.

For the entire collection see [\[Zbl 1047.68003\]](#).

Reviewer: [Dominique Lepingue \(Orléans\)](#)

MSC:

[60J80](#) Branching processes (Galton-Watson, birth-and-death, etc.)

Cited in **7** Documents

Keywords:

[random fragmentation](#); [random coagulation](#); [genealogical process](#); [Yule process](#)

Full Text: [arXiv](#)