

# BRANCHING PROCESSES WITH INTERACTIONS, AND THEIR RELATION TO POPULATION GENETICS

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**Abstract:** In this talk we will introduce a generalisation of the Wright Fisher model, for a population with finite size and non-overlapping generations, allowing for several types of selection as well as simultaneous multiple mergers. The construction provides an almost sure dual relation between its frequency process and its ancestral process, and a bridge between population genetics and Branching processes with interactions. Finally, we study the long time behaviour of a wide family of branching processes with interactions that have a moment dual.

## References

- [1] A. González Casanova & D. Spanò (2017). Modelling selection via multiple ancestors, Arxiv. 1612.04947
- [2] A. González Casanova, J. Carlos Pardo & J. L. Pérez (2017). Branching processes with interactions: the subcritical cooperative regime, Arxiv. 1704.04203