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Understanding interactions between populations: individual based modelling and quantification using pair correlation functions

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Highlights

- We present an agent-based model for interactions between two species
- We investigate how inter-individual interactions affect large-scale pattern formation
- The resulting patterns are quantified using a new pair correlation function (PCF).
- Mutually attractive or repulsive interactions between species can both produce aggregation
- Run-and-chase (attractive-repulsive) interactions between species are also considered
- The PCF can distinguish the underlying interactions, even if there is no obvious difference in the pattern

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