Modelling Reciprocating Relationships with Hawkes Processes
Poster W40

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respectively:

Gatsby Unit, UCL;
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W40: Implicit Social Graphs

Reciprocity

![Graph with nodes Alice, Bob, and Mallory showing directed edges and rate λpq(t) over time]
W40: Mutually-Exciting Hawkes Processes
A model of reciprocity

\[ \lambda_{\text{red}}(t) = \gamma_{\text{red}} + \int_0^t k_{\text{red}}(t, s)N_{\text{blue}}(ds) \]

\[ \lambda_{\text{blue}}(t) = \gamma_{\text{blue}} + \int_0^t k_{\text{blue}}(t, s)N_{\text{red}}(ds) \]
W40: Reciprocating Relationships: Examples


City hall meeting.