Dynamical Systems as Gaussian Process Prior Distributions

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1 Introduction

I will use the diff eq's from [2]. I will use data from [4]. In [3], red squirrel density in areas occupied only be red squirrels was estimated to be 0.39/ha based on Capture Mark Recapture methods. MoM estimation used to estimate IG prior. For more IG param estimation see [1]

References

[1] A Llera and CF Beckmann. Estimating an inverse gamma distribution. *arXiv preprint arXiv:1605.01019*, 2016.

[2] A Okubo, PK Maini, MH Williamson, and JD Murray. On the spatial spread of the grey squirrel in britain. *Proceedings of the Royal Society of London B: Biological Sciences*, 238(1291):113–125, 1989.

[3] Tommy S Parker and Charles H Nilon. Gray squirrel density, habitat suitability, and behavior in urban parks. *Urban Ecosystems*, 11(3):243–255, 2008.

[4] JC Reynolds. Details of the geographic replacement of the red squirrel (sciurus vulgaris) by the grey squirrel (sciurus carolinensis) in eastern england. *The Journal of Animal Ecology*, pages 149–162, 1985.