

CMSC 500

Topics: Artificial Life

Professor Ackles

1240-1410

T TR

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Día 6

- La pregunta para la discussion
- Que significa las figuras
- Main point

Graph 1 and 3 were more interpretable and 2 was mas dificil por que es mas complicado

Organisms que fueron mas succesful were robust; can adapt en su environment

Critical mutation rate: Threshold entre dos different states; one equilibrium a un otro

Graph 2: a vs b during high and low mutation rate; colour: how good and x axis how far from starting genotype

Low mutation rate means high replication rate does better por que a (con high replication) puede mantener better for longer posible?

High mutation rate means low replication rate does better; b es mas steady como a, y a gets a lot worse because no esta cambiando en un buen way

Critical mutation:

Find y predict the turning point? Como es calculated? Con a natural log

Formula:

$W_{sub 0}$ = intrinsic replication rate

Weird u = genomic mutation rate; NOT always less than 1

A y b = numeros especiales

Y = decay in rate of growth; how much will population disappear

Large mutation rate and large replication rate: decay rapido

Small mutation rate but large replication rate: decay lento

Looking for the zero; want $W_{sub 0,a}/W_{sub 0,b}$ to be 1 so that \ln of $W_{sub 0,a}/W_{sub 0,b}$ is 0

There is a differential equation

Basicamente, este equation es muuuuuy confusing

Not the ones with the highest score that are the most fit pero the ones that are mas adaptable