

# Optimizing the Traveling Salesman Problem: Novel Approaches based on Renormalization Groups

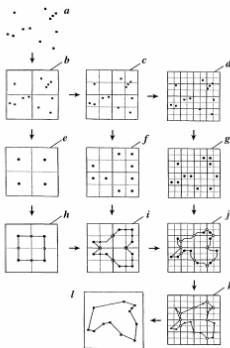
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# Background

- ▶ Quasi-optimal solutions: solve many easy TSPs
- ▶ Find new ways of grouping
- ▶ Compare to other solutions
- ▶ Find physical analogs



**Figure:** Gridding method of renormalizing the commonwealth into megapolitis, as opposed to individual cities.

# Lab Proposal

- ▶ Grouping by reverse diffusion process
- ▶ Radius of *C. elegans*' chemotactic path

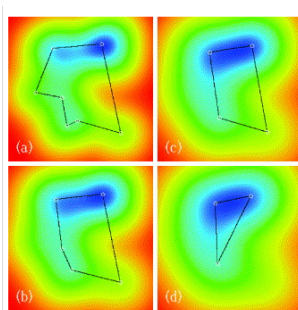


Figure: Diffusion as a physical analog to gridding