

Scientific Computing

April 4, 2025

Announcements

- Homework 5 assigned, due Fri Apr 18, 11:59pm
- No class Fri Apr 18, Mon Apr 21 (Easter Break)
- Final Exam will be Take-Home only

Today

- Simulated Annealing

Office Hours:

Mon + Fri

9:30am - 10:30am

Cudahy 307

* Spring Demo — continuous

- staying within constraints by re-tweaking

- playing with parameters

* Knapsack Demo — discrete

* Knapsack Demo

(1) Bad tweak function

(2) Constraint penalty

$$\text{score} \rightarrow \text{score} \cdot \left(1 - \mu \cdot \frac{\text{excess weight}}{\text{capacity}} \right)$$

where μ can be tuned statically
or dynamically