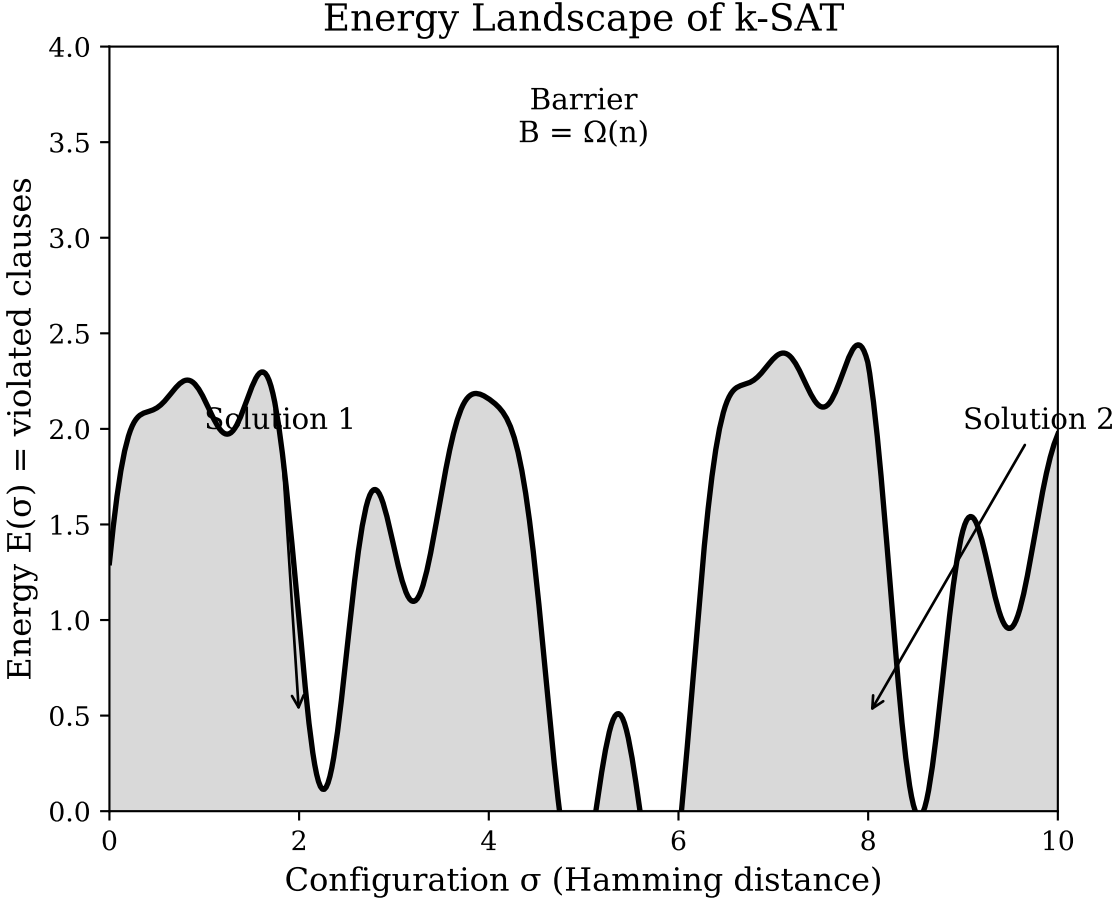
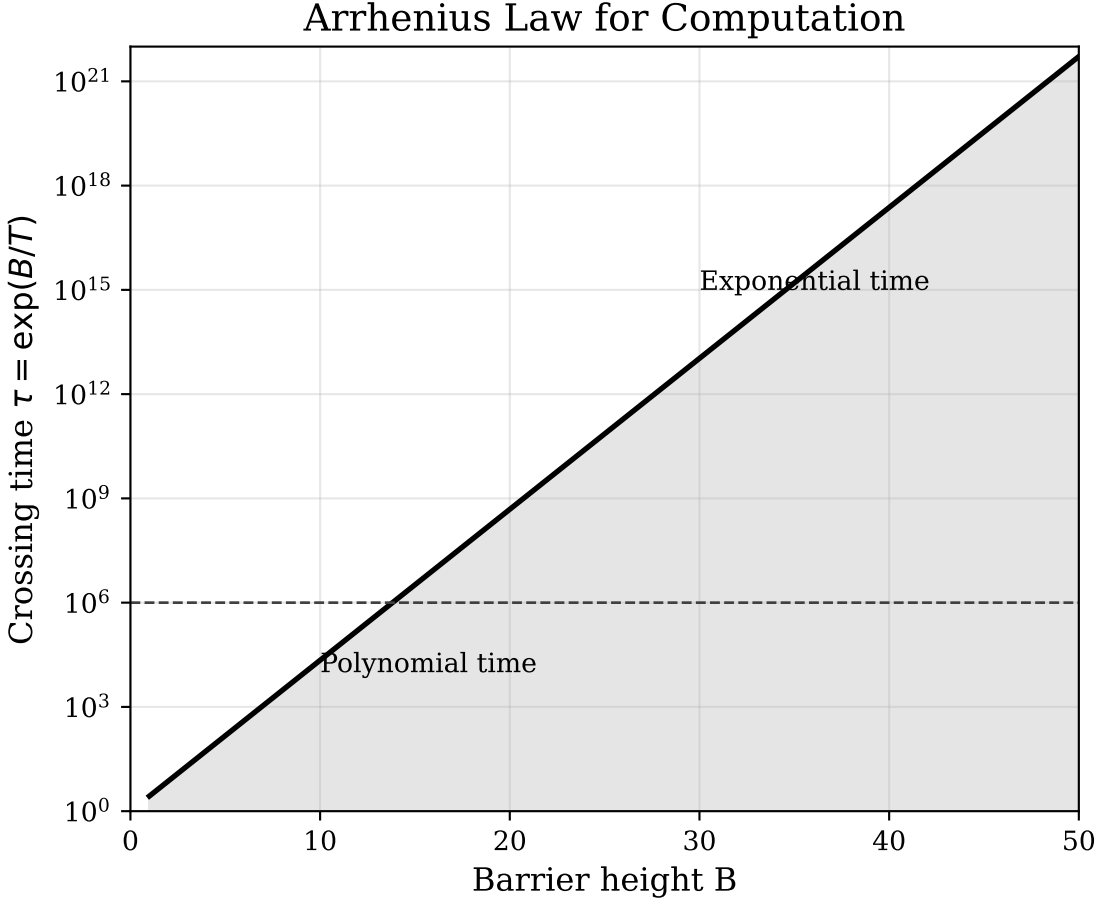

Energy Landscape of k-SAT
Barrier
B = Ω(n)
Solution 1
Solution 2
Energy E(σ) = violated clauses
Configuration σ (Hamming distance)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0
2
4
6
8
10


Arrhenius Law for Computation
Exponential time
Polynomial time
Crossing time τ = exp(B/T)
Barrier height B
10^{0}
10^{3}
10^{6}
10^{9}
10^{12}
10^{15}
10^{18}
10^{21}
0
10
20
30
40
50