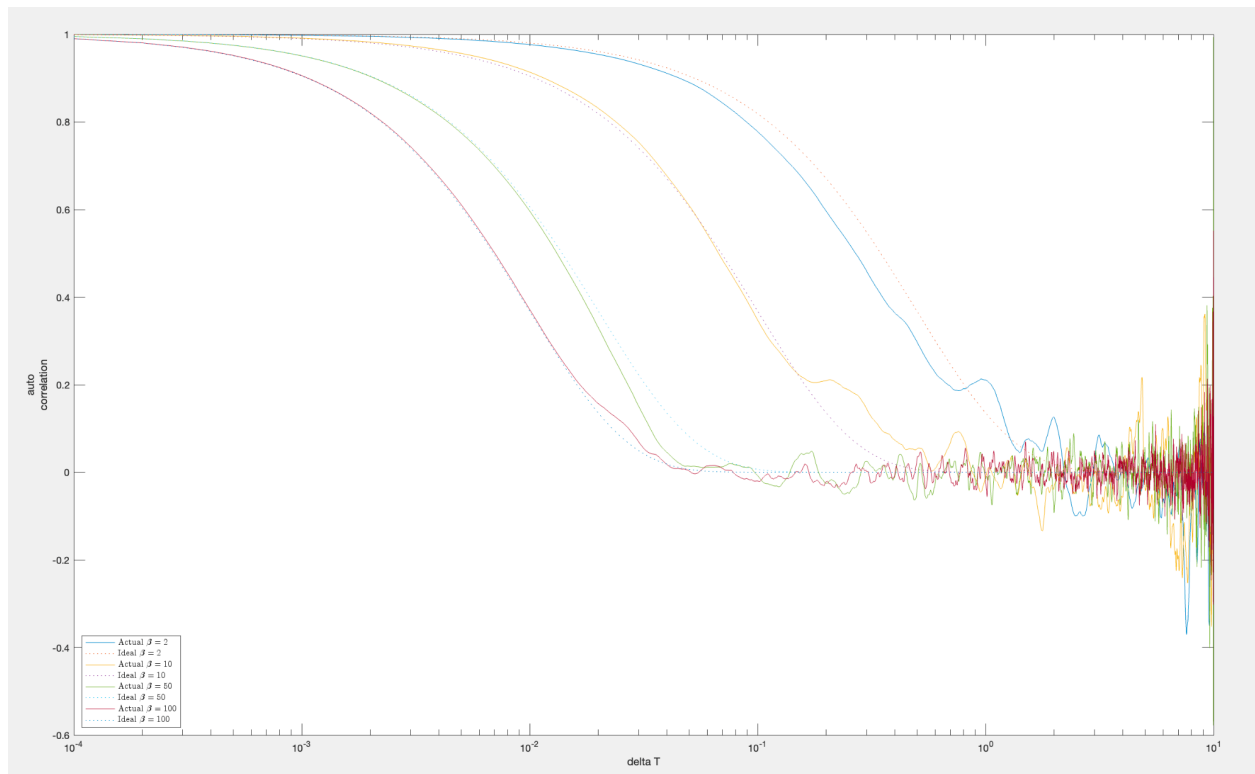


ENAS 991: Assignment 3 (Writeup)

Karthik Desingu

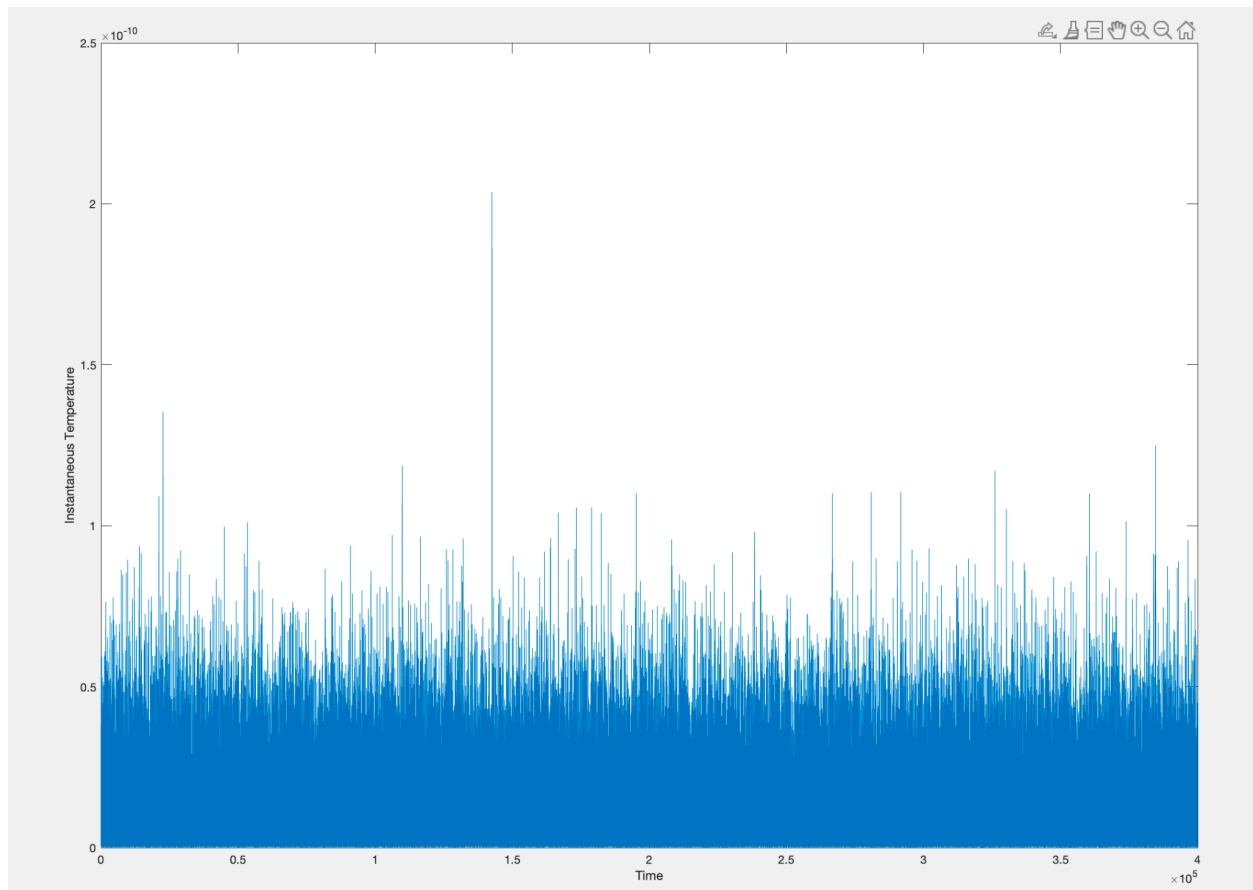
Problem 1



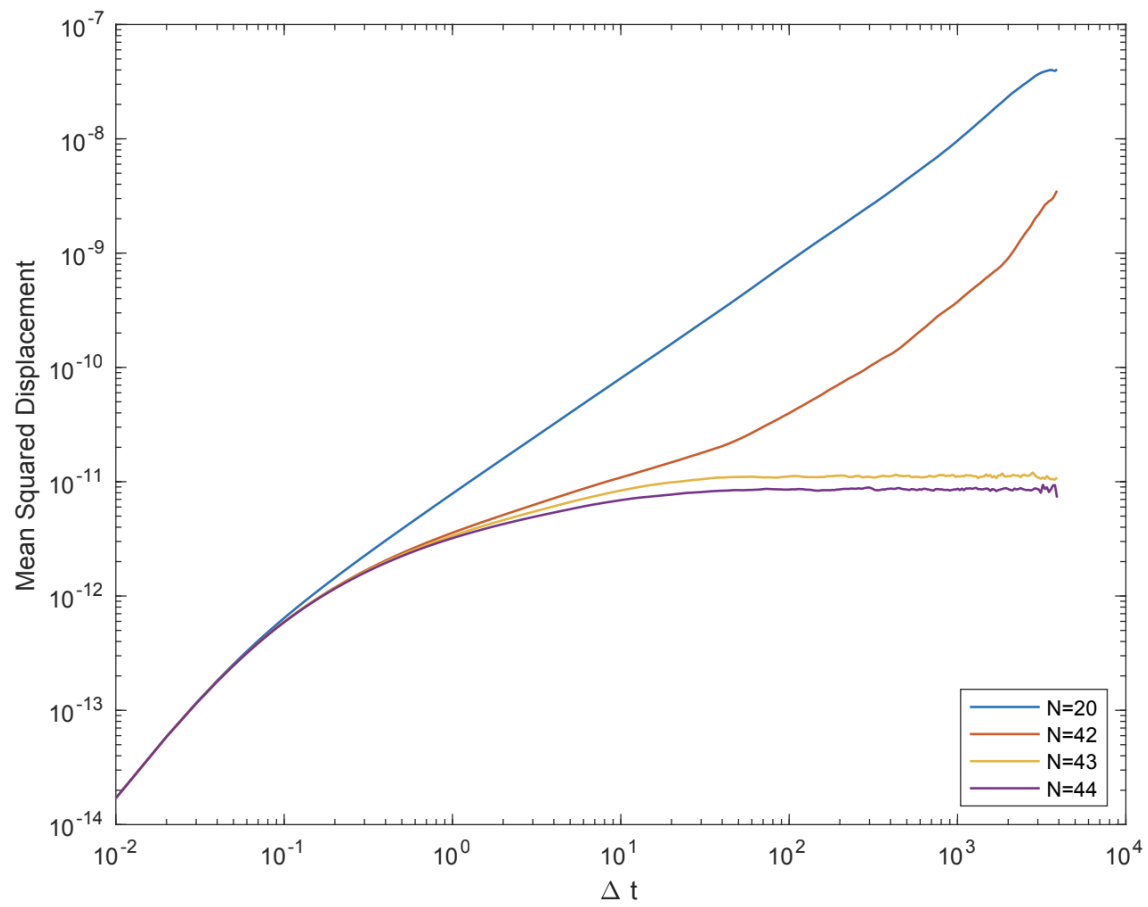
Auto-correlation vs. Delta T

Problem 2

- The mean value of instantaneous temperature is **1.0256e-11**.
- Yes, this is very close to the target temperature of $10\text{e-}12$.
- Instantaneous temperature fluctuates rapidly over time.



Plot of Instantaneous Temperature against Time



Plot of MSD against Time Window

- The MSD diverges at around $t=1$.
- At $N=44$, ϕ is about 0.8467.
- At high packing fractions, the caging behavior starts and diverging behavior stops.