

Close Reading Notes: Chris May's thesis

Chris does a nice job of introducing the subject as with some historical perspective and the relevance of his choice of model (Weeks-Chandler-Anderson potential) for fluids.

There is enough mathematical detail that a fellow classmate could follow his derivations. Particularly his arrival at the diffusion equation from a finite difference is enjoyable to follow given his perspective as a computational physicist.

The use of diagrams and illustrations in the theory/methods sections was very nice. In particular, Fig 3 is a great illustration that communicates how the radial distribution function is determined by taking successive annuli.

Fig 8 describes the Monte Carlo algorithm very nicely!

Comparison: Jeremy Meinke

The background section does a good job of outlining how kinesin compares to other motor proteins.

I wanted to read more about the TIRF microscopy and single molecule imaging as that seemed like the most "physics-y" part. I could only find one equation in the entire paper and it was just a Gaussian!