Abstract Submitted
for the 4CS19 Meeting of
The American Physical Society

Modeling Particles Using Lennard-Jones Potential in 2D
MELANIE PRICE, Brigham Young University - Provo — When working on particle simulations, it's good to begin with particles interacting via the Lennard-Jones (L-J) potential. This classical model is useful because it correctly describes simple atomic attractions and repulsions. In addition, L-J particles are computationally cheap and simple to simulate. The L-J potential model can be used to simulate the behaviors of liquids and gases on an atomic level and explore the differences between computational algorithms. I created a simulation of several dozen L-J particles interacting with each other in a two-dimensional system and found an efficient way implement periodic boundary conditions. In my presentation, I will outline how others can create a simple L-J particle system of their own.

Melanie Price
Brigham Young University - Provo

Date submitted: 12 Sep 2019 Electronic form version 1.4