

HW #16: Autocorrelation

1. – 2D Image Processing & Analysis:

Using the best image you took of the pennies that I loaned to you:

- a) Calculate the radial distribution function
- b) Calculate the radial density function
- c) What we typically then do is to *average* what we'd get by picking different centroids as our starting point: that's then called a **correlation function**, $g(r)$.
- d) How does the correlation function, $g(r)$, relate to the structure factor, $S(k)$?