

**ECE 656: Fall 2011**  
**Lecture 15 Homework**  
**Due MONDAY, October 3, 2011**

- 1) In Lecture 15, we stated that for power law scattering in 2D

$$\langle\langle\tau_m\rangle\rangle = \tau_0 \frac{\Gamma(s+2)}{\Gamma(2)},$$

where  $s$  is the characteristic exponent. Prove this result.

- 2) Work out the corresponding result in 1D.
- 3) Work out the corresponding result in 3D.