Electrodynamics II   Problems #5: Electromagnetic Field Transformations.   KSU

Assigned on Thursday, March 24, 2016.

Remember, you can volunteer to explain any of these at the board. You don't need to work them all out, these are the problems most closely related to the recent lectures.

Problems in Jackson's 3rd edition:

11.13 EM fields in a moving conductor
11.14 Lorentz invariant scalars quadratic in **E** and **B**
11.15 Transformation to a frame with parallel **E** and **B**
11.16 Covariant form of Ohm's Law
11.27 Charge and current densities of a moving electric dipole
11.28 EM field transformation of a moving electric dipole