1123-35-400   **Dana Mendelson***, dana@math.uchicago.edu. *Random data Cauchy theory for some nonlinear wave equations.*

I will discuss two problems on nonlinear wave equations with random initial data. The first, based on joint work with Luhrmann, focuses on nonlinear wave equations with defocusing energy-subcritical power-type nonlinearity on Euclidean space. The second problem, based on work in progress with Chanillo, Czubak, Nahmod and Staffilani, concerns energy critical nonlinear wave equations with null form nonlinearities in both the periodic and the Euclidean setting. I will present several almost sure well-posedness results for these equations and contrast the ways in which random data techniques can be exploited in these different contexts. (Received August 30, 2016)