Homework 3 - Due Wed. Mar. 7th
Introduction to Harmonic Analysis and its Applications

Dr. Mauro Maggioni
Web page: www.math.jhu.edu/~mauro

Office: 405 Krieger Hall
E-mail: myfirstname.maggioni@jhu.edu

Homework Policies

As in Homework 1.

Assignment

Study Chapter 7 Section 1 in Stein and Shakarchi’s book, about discrete Fourier analysis.

Exercises

Exercise 1 (50pts). Exercise 3 from chapter 5 part (a) in Stein and Shakarchi’s book, on how decay of the Fourier transform implies Hölder regularity.

Exercise 2 (50pts). Exercise 16 from chapter 5 part (a) in Stein and Shakarchi’s book, on Dirichlet kernel on $\mathbb{R}$ and its periodization being the Dirichlet kernel on $S^1$. 