CAAM 499 HW 2. DUE BY 11AM THURSDAY 9/21

Textbook exercises in chapter 2:

Exercise 1 (Hint:Use change of variables to verify the hint.)

Exercise 4

Exercise 5 (Hint: Remember f is not necessarily a function, but a distribution. Carefully use the definition in exercise 1 to show the statement of the problem.)

Exercise 7 (Hint: change of variables. Remember that you are *defining* what $f \circ h$ should mean when $f \in \mathcal{D}'$ is a distribution and not necessarily a function)

Exercise 8 (Hint: Use change of variables formula. As before, you are defining what $f \circ R_\theta$ should mean when $f \in \mathcal{D}'$ is not necessarily a function)

Exercise 15

Bonus: Exercise 11 (Hint: write out fully the definition of what it means to be radial from exercise 9 and then take the derivative with respect to θ)

Bonus: Exercise 20