Readings and Discussion Questions

Thursday October 12

Read Chapters: 4.3.2, 4.3.3

Discussion Questions

1. Why is the Radon transform when $n = 2$ sometimes called the X-ray transform?

2. If $u$ has compact support, what can you say about its Radon transform?

3. How does (31) relate the $n$-dimensional Fourier transform with a one-dimensional Fourier transform of the Radon transform?

4. How do you relate the Radon transform of a rotation of $u$ with the Radon transform of $u$? In particular, what can you say about the Radon transform of a radial function?

5. In what sense is the Laplace transform an analytic continuation of the Fourier transform?