The issue of how to write the Fourier transform arose during this meeting. The seminar organizers believe that the best way to write the Fourier transform of a function $f(x)$ is

$$\hat{f}(\xi) = \int_{\mathbb{R}} e^{-2\pi i \xi x} f(x) dx.$$

That is, we take the torus to be the unit interval $[0, 1]$ with the ends glued together. Using this definition, one does not need to worry about normalizing coefficients, making calculations much cleaner. Dym and McKeen use this definition as well. Unfortunately, our texts for the course, as well as Krantz, take the torus to be the interval $[0, 2\pi]$ with the ends glued together, defining the Fourier transform as

$$\hat{f}(\xi) = \int_{\mathbb{R}} e^{-i\xi x} f(x) dx.$$

Then one must multiply and divide at various times by the length of the torus, 2π, or by $\sqrt{2\pi}$. It gets messy. To avoid confusion between weekly presentations and the selected texts, however, we will use this messy notation.