PMATH 950: Harmonic Analysis
Winter 2016

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Content. I will cover all of the basic topics:
– locally compact groups, Haar measure
– abelian harmonic analysis, Pontryagin duality
– compact harmonic ananlysis, Peter-Weyl Theorem, Tannaka-Krein duality
– amenable groups, Reiter and Følner conditions, Hulanicki's theorem.

Prerequisites. Every student must have a course in functional analysis (PM 753, or equivalent), and exposure to abstract measure theory (PM 651, or equivalent).

Texts. The course will be self-contained and no text is required. I will be using material from the following books, which I will put on reserve in the library.

[1] G. B. Folland, *A Course in Abstract Harmonic Analysis*, CRC Press, 1995.

[2] E. Hewitt and K. A. Ross, *Abstract Harmonic Analysis I*, Springer, 1963.

[3] E. Hewitt and K. A. Ross, *Abstract Harmonic Analysis II*, Springer, 1970.

[4] W. Rudin, *Fourier Analysis on Groups*, Wiley, 1962.