

Lectures on Pure and Applied Math



Announcing

A Seminar Presentation
on October 29, 2015

at 4:30 pm in Maxcy 203

at The University of New Haven

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The University of New Haven

Title: How to define the Fourier transform for an entire function?

Abstract:

The Fourier series and Fourier transform both play an important role in the solution of various mathematical problems and in applied mathematics. For a function $f(x)$ with real x , students (at least math majors) know what is its Fourier series (if f is periodic) or Fourier transform. The Fourier transform of f , in order for it to exist in the classical sense, requires that f must be absolutely integrable.

In complex analysis of important classes of functions includes analytic and entire functions. These functions are not always periodic and not absolutely integrable. The question is how to define the Fourier transform of an analytic or entire function with the same (or similar) properties as the real Fourier transform has?

We will discuss this question in the simplest 1-D case, making the discussion accessible for students.

Further Information

For further information, please contact Angie Domschine at the Department of Mathematics, Office: Maxcy 204, 203-932-7250, ADomschine@newhaven.edu.