1030-42-70   **Isaac Pesenson*** (`pesenson@temple.edu`). *Discrete Fourier Transform on compact manifolds and finite graphs.*

A Discrete Fourier Transform, DFT, is a method to approximate Fourier coefficients of a function by using some incomplete information about the function. Such incomplete information is normally given as a finite set of values of a function (a set of samples). In the talk we will present a DFT for computing Fourier coefficients of functions on compact Riemannian manifolds or on finite graphs. The method is exact on the set of bandlimited functions. (Received July 16, 2007)