

**Meeting:** 999, Nashville, Tennessee, SS 2A, Special Session on Wavelets, Frames, and Sampling

999-45-217            **M Zuhair Nashed\*** (znashed@mail.ucf.edu), Department of Mathematics, P. O. Box 161364, Orlando, FL 32816. *Sampling Solutions of Integral and Operator Equations of the First Kind*. Preliminary report.

We consider linear operator equations of the first kind, where the range of the operator is a reproducing kernel Hilbert space under a suitable inner product. Under the assumption that the solution space admits sampling expansions we describe simple Fourier-type approximations to the solutions and consider various error estimates for the approximations (corresponding to truncation, amplitude error, "aliasing", and jitter). (Received August 23, 2004)