

Meeting: 1003, Atlanta, Georgia, SS 5A, AMS Special Session on Radon Transform and Inverse Problems, I

1003-41-562 **Peter R Massopust*** (pmassopust@varco.com), 2835 Holmes Road, Technical Center, Houston, TX 77051. *Reconstruction of Smooth Functions from Incomplete Information.*

We consider the problem of reconstructing a function f from a given set of sampled values in case a finite set of samples is incorrect or missing. A procedure for the reconstruction of f , using B-Spline approximation and Hermite Interpolation, is presented provided a priori knowledge of the smoothness properties of f is available. Error estimates for the reconstruction are stated and numerical examples given. (Received September 22, 2004)