Amin Boumenir\* (boumenir@westga.edu), University of West Georgia, Carrollton, GA 30118, and Vu Kim Tuan, University of West Georgia, Carrollton, GA 30118. Sampling in Hardy Spaces.

We prove a new sampling formula for functions in Hardy spaces and disprove the existence of a Shannon sampling type formula there. This extends the sampling method to compute eigenvalues of a singular Sturm-Liouville problem in the presence of a continuous spectrum. We also show a new series representation of the Riemann zeta function in the half plane. (Received August 10, 2009)