Roza Aceska* (roza.aceska@vanderbilt.edu), Akram Aldroubi (akram.alroubi@vanderbilt.edu) and Sui Tang (sui.tang@vanderbilt.edu). Dynamical sampling in hybrid shift invariant spaces. Preliminary report.

In sampling and reconstruction problems of a time-varying field it is more reasonable to work with hybrid shift-invariant spaces (HSIS). The localized nature of these spaces allows for choosing locally adapted building blocks and sampling rates. We explore the properties of these spaces. Then we generalize the technique of dynamical sampling in shift-invariant spaces to HSIS and explore the possibility of sub-sampling with a spatially adaptive sampling rate. (Received September 16, 2013)