1120-94-292 **Sui Tang*** (rosier1989@gmail.com), 1326 Stevenson center, Vanderbilt University, Nashville, TN 37240. *Dynamical sampling.*

Let $f \in \ell^2(\mathbb{I})$ be a signal at time $t = 0$ of an evolution process controlled by a bounded linear operator A that produces the signals $Af, A^2f, \cdots$ at times $t = 1, 2, \cdots$. Let $Y = \{f(i), Af(i), \cdots, A^{l_i}f(i) : i \in \Omega \subset \mathbb{I}\}$ be the spatiotemporal samples taken at various time levels. The problem under consideration is to find necessary and sufficient conditions on A, Ω, l_i in order to recover any $f \in \ell^2(\mathbb{I})$ from the measurements Y. This is so called Dynamical Sampling Problem in which we seek to recover a signal f by combining coarse samples of f and its futures states $A^l f$. In this talk, we will study the problem and show some recent results. (Received February 23, 2016)