We provide a non-stationary version of the Furstenberg Theorem on random matrix products. For example, it turns out that under some natural genericity assumptions the random product of matrices grows at least exponentially almost surely even in the case of not identically distributed matrix valued random variables. As an application, we obtain Anderson Localization for 1D discrete Schrödinger operators with non-stationary random potentials. This is a joint project with Victor Kleptsyn. (Received August 22, 2019)