Let \( \{\varepsilon_k, k \in \mathbb{Z}\} \) be i.i.d. r.v.s and let \( f : \mathbb{R}^\mathbb{Z} \to \mathbb{R} \) be measurable and such that
\[
y_k = f(\ldots, \varepsilon_{k-1}, \varepsilon_k, \varepsilon_{k+1}, \ldots)
\]
is well defined. Sequences \( \{y_k, k \in \mathbb{Z}\} \) which may be represented as in (1) form a very important class of stationary and ergodic processes. E.g. many well known time series models can be representent in such a way. Due to the generic form of the \( y_k \) there are different methods (e.g. coupling) to obtain \( m \)-dependent r.v.s \( y_{km} \) which approximate \( y_k \) very well. The purpose of the talk is to show on the basis of several examples that the approximation error \( |y_{km} - y_k| \) is typically easy to compute. If the error is small in some sense this can be used to deduce very sharp asymptotic results avoiding the usually difficult verification of mixing conditions.