Records and 2-block records of 1-dependent stationary sequences under local dependence.

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Abstract

We first study the records of several examples of 1-dependent stationary sequences $(X(n))$, some of them which satisfy a local independence condition introduced in Haiman (1987), whereas the other do not satisfy this condition. For the second category (called with local dependece), we then extend a result of the above cited paper by proving, (under some regularity conditions on the joint distribution of $(X(1), X(2), X(3))$, that the 2-block recordatimes of $(X(n))$ a.s. coincide, (via a translation of the time index and from some index on) with the record times of an appropriately constructed i.i.d. sequence $(Y(n))$, whereas the 2- block record values of $(X(n))$ and the record values of $(Y(n))$ are imbricate.