# On the Jacobsthal function and prime-covering in integer sequences

For an arbitrary natural number $m$, the Jacobsthal function $j(m)$ denotes the least integer $k$ such that in the set of every $k$ consecutive integers one can find with the property that it is coprime to $m$. One possible generalization of $j$ is the following. Let $x = (x_n)_{n=0}^{\infty}$ be a sequence of arbitrary integers and define $j_x(m)$ as the smallest $k$ such that among every $k$ consecutive terms of $x$ there is always one which is coprime to $m$. In this talk I am going to present some results concerning the existence and value of $j_x$ in some well-known families of sequences, like polynomial-value sequences and divisibility sequences. The main motivation behind the covered topic is the insight it provides into the so-called prime-covering of consecutive terms of such sequences.