Manjil Saikia*, School of Mathematics, 21 - 23 Senghennydd Road, Cardiff, Cardiff CF244AG, United Kingdom, and Hassan Izanloo. Signed Roman Domination on Cartesian Product of Some Graphs. Preliminary report.

A signed Roman dominating function (SRDF) on a graph $G = (V, E)$ is a function $f : V \rightarrow \{-1, 1, 2\}$ satisfying the conditions that, the sum of its function values over any closed neighborhood is at least one and every vertex $u$ for which $f(u) = -1$ is adjacent to at least one vertex $v$ for which $f(v) = 2$. The weight of a SRDF is the sum of $f(v)$ over all vertices $v$ and the signed Roman domination number (SRDN) of $G$ is the minimum weight of a SRDF in $G$. In this talk we will study the SRDN of cartesian products of some graphs. This is joint work with Hassan Izanloo. (Received August 17, 2020)