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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)