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Linyuan Lu and **Zhiyu Wang*** (zhiyuw@math.sc.edu). *On the cover Turán number of Berge hypergraphs.*

For a fixed set of positive integers R , we say \mathcal{H} is an R -uniform hypergraph, or R -graph, if the cardinality of each edge belongs to R . For a graph $G = (V, E)$, a hypergraph \mathcal{H} is called a *Berge- G* , denoted by BG , if there is an injection $i: V(G) \rightarrow V(\mathcal{H})$ and a bijection $f: E(G) \rightarrow E(\mathcal{H})$ such that for all $e = uv \in E(G)$, we have $\{i(u), i(v)\} \subseteq f(e)$. We define a variant of Turán number in hypergraphs, namely the *cover Turán number*, denoted as $\hat{e}x_R(n, G)$, as the maximum number of edges in the shadow graph of a Berge- G -free R -graph on n vertices. We show a general upper bound on the cover Turán number of graphs and determine the cover Turán density of all graphs when the uniformity of the host hypergraph equals to 3. (Received September 05, 2019)