SUM-LIST COLOURIG OF HYPERGRAPHS

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Given a hypergraph $\mathcal{H}$ and a function f from $V(\mathcal{H})$ to the set of positive integers, $\mathcal{H}$ is called f-choosable if there is a proper coloring ϕ such that $\phi(v) \in L(v)$ for all $v \in V(\mathcal{H})$, where $L(v)$ is any assignment of $f(v)$ colors to v. The sum choice number $\chi_{sc}(\mathcal{H})$ of $\mathcal{H}$ is defined to be the minimum of $\sum_{v \in V(\mathcal{H})} f(v)$ over all functions f such that $\mathcal{H}$ is f-choosable. The trivial upper bound on $\chi_{sc}(\mathcal{H})$ is $|V(\mathcal{H})| + |E(\mathcal{H})|$. The hypergraphs that achieve this bound are called *sc*-greedy. We give some properties of *sc*-greedy hypergraphs. Next we determine the sum choice number of θ-hypergraphs.