The Covering Numbers of Some Finite Simple Groups

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A finite collection $\mathcal{C}$ of proper subgroups of a group G such that G is the union of the members of $\mathcal{C}$ is called a *finite cover* of G. Any group with a finite noncyclic homomorphic image has a finite cover, and for such a group we define its *covering number* to be the minimum of the set of cardinalitites of its finite covers. The aim of this talk is to present recent results on the covering numbers of several finite simple groups, including the sporadic Higman-Sims, McLaughlin and Held groups.

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