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**Nicholas J Werner\*** ([werner.79@osu.edu](mailto:werner.79@osu.edu)). *Covering Numbers of Finite Rings.*

Any finite non-cyclic group  $G$  is equal to a union of its proper subgroups. The covering number of  $G$  is the minimum number of subgroups necessary to cover  $G$ . Covering numbers are known for several classes of finite groups, and the computation of covering numbers is a problem of current interest.

In this brief talk, we will give an overview of the analogous problem for finite rings. In general, not much is known. We say that a finite (associative, unital) ring  $R$  is coverable if it is equal to a union of its proper subrings, and the covering number of  $R$  is the minimum number of subrings required to cover  $R$ . Not every finite ring is coverable, and it is nontrivial to decide whether  $R$  is coverable. We will outline the known results for coverable rings and their covering numbers, and will suggest avenues for further inquiry. (Received September 07, 2014)