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**Lewis P Bowen\*** ([lpbowen@math.tamu.edu](mailto:lpbowen@math.tamu.edu)), Texas A&M University, Mailstop 3368, College Station, TX 78726. *Entropy theory for actions of sofic groups.*

In 1958, Kolmogorov defined the entropy of a probability measure preserving transformation. Entropy has since been central to the classification theory of measurable dynamics. In the 70s and 80s researchers extended entropy theory to measure preserving actions of amenable groups (Kieffer, Ornstein-Weiss). My recent work generalizes the entropy concept to actions of sofic groups; a class of groups that contains for example, all subgroups of  $GL(n, \mathbb{C})$ . Applications include the classification of Bernoulli shifts over a free group, answering a question of Ornstein and Weiss. (Received May 07, 2011)