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Nhan-Phu Chung* (phuchung@buffalo.edu), Department of Mathematics, SUNY at Buffalo, Buffalo, NY 14260. *The variational principle for topological pressures of actions by sofic groups.*

Sofic groups were first introduced by Mikhail Gromov as a common generalization of amenable groups and residually finite groups. In 2008, in a remarkable breakthrough, via modeling the dynamics of a measurable partition of probability space by means of partitions of a finite space, Lewis Bowen showed how to define entropy for measure-preserving actions of countable sofic groups. Later, using ideas in operator algebras, David Kerr and Hanfeng Li, developed a more general approach for both measure and topological sofic entropies and established the variational principle for this context.

In this talk, applying Kerr and Li's method, I will define the topological pressure for actions of sofic groups and establish the variational principle for topological pressure. (Received August 15, 2011)