

Title: Pressure, equilibrium measures, Gibbs measures, the variational principle and the Lanford-Ruelle theorem in the context of sofic approximations.

Abstract: Sofic Groups (and sofic approximation) were formally introduced by Gromov and named by Weiss in the late 1990's. About a decade later, Lewis Bowen introduced the notion of sofic entropy that led to important breakthroughs in ergodic theory of non-amenable group actions. However, sofic approximation sequences have been implicitly considered much earlier by probabilists, statistical mechanics and others. After a basic introduction to sofic approximations and sofic entropy, I will discuss a rather simple proof of the Lanford- Ruelle theorem regarding a variational characterization of Gibbs measures in the context of sofic approximations that we obtained in collaboration with Sebastião Barbieri about a couple of years ago.