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Pinsker algebras for 1-bounded entropy I.

I will discuss joint work with Jekel-Nelson-Sinclair where we discuss Pinsker algebras in the context of 1-bounded entropy, implicitly defined in work of Jung and explicitly in previous work of mine. The 1-bounded entropy is a von Neumann algebra invariant defined as a modification of the free entropy dimension, and measures “how many” finitary approximations a tracial von Neumann algebra M has. Pinsker algebras, defined in analogy with ergodic theory, are maximal subalgebras of 1-bounded entropy zero. My talk will be mostly on the definition of 1-bounded entropy and Pinsker algebras, and their main properties. I will discuss how one can use random matrix models to show certain subalgebras are Pinsker, and how this relates to maximal amenable subalgebras of free group factors. David Jekel will present more of the details in a follow up talk. (Received September 02, 2019)